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1. library science fundamentals
2. library buildings
3. " services
4. " classification
5. " catalogue
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7. " functions
8. bibliography
9. library science laws.

UNIVERSITY OF DELHI

Department of Library Science

PREFACE TO LIBRARY SCIENCE

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13. Colon classification.
14. Prolegomena to library classification.
15. Library classification : Fundamentals and procedure.
16. Elements of library classification.
17. Classification of Marathi literature.
18. Classification of Telugu literature.
19. Classified catalogue code.
20. Dictionary catalogue code.
21. Theory of library catalogue.
22. Reference service and bibliography.
23. Bibliography of reference books and bibliographies.

In the press

24. Library development plan with a draft library bill for the United Provinces.
25. Library catalogue: Fundamentals and procedure.

PREFACE TO LIBRARY SCIENCE

By

S. R. RANGANATHAN
M.A., D. Litt., L.T., F.L.A.

WITH A FOREWORD BY

SIR MAURICE GWYER
G.C.I.E., K.C.S.I., K.C.B, D.C.L., LL.D.
Vice-Chancellor, University of Delhi

CENTRAL FOOD TECHNOLOGICAL RESEARCH INSTITUTE
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To

Sri R. Natesan

1. Books are for use.
2. Every reader his book.
3. Every book its reader.
4. Save the time of the reader.
5. Library is a growing organism.

कोशवान् हि सदाचार्यः पंचसूत्रीपरायणः ।
पुस्तानि पठितुं, तानि सर्वेभ्यः, स्वंस्वमाप्नुयुः ॥
पठन्तं समयं तस्य शेषेत् , कोशः सदापि च ।
वर्धमानः स चिन्मूर्तिः पंचसूत्रीं विदन्त्विमाम् ॥

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CONTENTS

Lecture		*Page*
	Acknowledgements	8
	Foreword	13
	Conspectus	15
1.	**Library Science and Fundamental Values**	17

11 Personal profit. 12 Social well-being. 13 Creative joy. 14 Fulfilment of a nation's mission. 15 Delight of release. 16 Indian tradition. 17 Library Science subtends all purposes equally and simultaneously. 18 A subject of unknown potency. 19 A subject of unknown content.

2.	**Field of Library Science: An Approach from the Side of Books**	31

21 Library buildings, fittings and furniture.

241 Book selection. 242 Book order. 243 Periodical work. 244 Accessioning. 245 Preparation of books.

255 Library catalogue. 251 Library classification.

26 Circulation work.

272 Library publicity.

27 Reference service. 28 Shelf work. 29 Summary.

3.	**Field of Library Science: An Approach from the Side of Readers**	44

311 National library.

321 City library. 322 Rural library.

33 Academic library.

34 Business library. 341 Industrial library.

342 Newspaper Office library. 345 Commercial library.

348 Departmental libraries.

35 Special library. 351 Children's library.

353 Prison library. 354 Hospital library.

355 Sea-farer's library. 356 Library for the blind

391 Archival library.

4. Adjuncts to Field of Library Science 69

41 Library organisation.

42 Physical bibliography. 421 Paper. 422 Printing. 423 Binding. 424 The finished book.

43 Enumerative bibliography.

44 Field of knowledge.

45 Meta-library-science.

5. Highways and Byways in the Field of Library Science 83

51 Building and equipment.

541 Book selection. 542 Book purchase

555 Library catalogue.

56 Circulation work.

57 Reference service. 572 Publicity work.

58 Shelf work.

59 Adjunct problems. 591 Summary.

6. Is there a Library Science ? 90

611 Divergent practices. 612 Disjointed information. 613 First gleam.

62 Aanalogy of the laws of motion.

63 Trivility of laws. 631 An anecdote on triviality. 632 Reaching the stage of science.

64 Note of scepticism.

65 Material of study irrelevent. 651 Old practice at Oxford. 652 Testimony of Jevons. 653 Testimony of dictionary. 654 Longing of Omar Khayyam.

66 Method of study indecisive.

67 Mathematical treatment.

68 Topology as a tool.

69 Reminding of King Canute.

7. The Laws of Library Science 107

70 Groping in the dark. 701 Appearance of light.

71 First law. 711 Book-exhibition. 712 Attractive books. 713 Enlivening the books. 714 Material tests.

72 Second law. 721 Advent of democracy. 722 Library legislation. 723 Range of book collection.

73 Third law. 731 Library publicity. 732 Cultivation of reading habit in childhood. 733 Subject analyticals. 734 Bock display. 735 Independence of the Third law.

74 Fourth law. 741 Qualifications for reference librarians. 742 Subjective time. 743 Open acess. 744 Issue method.

745 Library classification. 7450 Colon Classification. 7451 In relation to first law. 7452 In relation to second law. 7453 In relation to third law.

746 Library catalogue. 7461 Function of classified part.

747 Standardisation and simplification. 748 Centralisation.

75 Fifth law. 751 Indian libraries of to-day. 7511 Transitory phase. 752 Growth in number of readers. 753 Library building. 754 Formula for the strength of staff.

8. Scope for Pursuit of Library Science 139

81 Three factors. 811 Example of Mathematics. 812 Its enrichment of the subjects. 813 Provision without bargain. 814 Psychology of research.

82 Contents of library science. 821 Gleam of reassurance. 822 Confirmation of confidence. 823 Experience of depth and potency. 824 The vision of the University of Delhi.

83 Example of the United States.

84 Necessary for social betterment. 841 Betterment of personality. 842 Vital role of mental growth. 843 Master-switch. 844 Technique of betterment.

85 Cosmic economy. 851 Division of labour. 852 Research degrees. 853 Value to pedestrians. 854 Value to the nation.

86 The case for Library Science.

9. Urgency for the Pursuit of Library Science 158

91 Due to the independent status of India. 911 Mahatma Gandhi's service. 912 A message of his martyrdom. 913 Means of mental growth.

92 Means to make up for past stagnation.

93 To produce the necessary library man-power. 931 Business libraries. 93 Industrial libraries. 93 Newspaper Office libraries. 9315 Commercial libraries. 9318 Departmental libraries. 932 Academic libraries. 933 Public libraries. 934 Total immediate staff. 935 Total ultimate staff.

94 Amplitude.

95 Library Science and national revival.

Appendix : Syllabus and prescribed books for the Diploma and the Degree Courses in Library Science. 178

Index : 193

FOREWORD

I warmly commend Dr. S. R. Ranganathan's book to all who are interested in libraries in India, and I hope indeed that it will secure readers in an even wider circle.

I remember very well being given a collection of Dr. Ranganathan's books by Rao Bahadur K. V. Krishnaswami Ayyar, the President of the Madras Library Association, and reading them before I had made the acquaintance of the author himself. This was my first introduction to Library Science, a subject on which I confess that up to that time I knew nothing at all; but it did not take me long to realise its far-reaching importance both from the educational and cultural point of view. Nor could I fail to admire not only the profound knowledge of his subject which the author displayed but also the disciplined enthusiasm with which he approached his exposition of it.

Just as a large and comprehensive programme of industrial development requires the preliminary labours of the makers of specialised machine-tools with their jigs and gauges, who now constitute a highly specialised branch of engineering, so Library Science is now an essential basis for the organization and development of libraries in order that they may become more effective instruments at the service of learning and research. This science has advanced more rapidly elsewhere than in India and Dr. Ranganathan's work is probably better known and appreciated in foreign countries than in his own; but when the new India realises its immense value and the results which are likely to flow from it, I cannot doubt that the progress of the science will be equally great in India also.

It is a very great satisfaction to me that Delhi University is the first University in India to institute a degree in Library

Science, following in this the example of some of the great Universities in America. Dr. Ranganathan's presence among us is a guarantee that the principles which he has laid down in this book will be faithfully observed; and it is fitting that the book itslef should be published under the auspices of the University.

University of Delhi,
November, 1948.

MAURICE GWYER

CONSPECTUS

This book is intended for a mixed audience. It is based on the inaugural lectures delivered in the Department of Library Science in the University of Delhi in 1947. This accounts for its mixed nature. An attempt was made in the course of the lectures to justify the claim of Library Science to the second word in its title. In fact lectures 6, 7, 8 and 9 were devoted to this subject. I would, therefore, recommend to the general reader that he may begin with these four chapters and end by reading the first chapter. Students of Library Science, on the other hand, will find it worthwhile to do also chapters 2 to 5.

The first chapter and the last four chapters together constitute what may be called a Librarian's Apology. This accounts for a trace of autobiography in these chapters.

My change from the profession of teaching Mathematics to the library profession was sudden and uncontemplated. But I am now convinced that I would not have lived as full a life, as I am satisfied I have now done, if I had stuck on to my original calling. During the twenty-five years I had been a librarian, libraries have risen considerably in public esteem. Modern life needs so much of information that it may not all be got either by direct observation or by oral communication from others. Recorded information has to be the main stay. Its organization and service in a most helpful way calls for a new technique. This technique is now being forged and expanded with great vigour all the world over. It is a matter for satisfaction that India has shaken off her centuries of stupor and bondage and is in a position to take an active part in the furtherance of the new discipline called Library Science.

Chapter 1 is devoted to the fundamental values of life that can be derived from a pursuit of Library Science — values for the individual as well as the nation. It makes use of the tests provided by Indian tradition under the name *purusharthas*.

Chapter 2 introduces the freshman student to the various kinds of work involved in library management, by connecting them with the experience he would have had as an undergraduate in his college library.

Chapter 3 gives a picture of the different kinds of libraries which a national library system should comprehend.

Chapter 4 deals with certain auxiliary subjects which it is desirable that a librarian should know if he is to do his daily work with advantage. This group of subjects has been labelled Meta-library-science.

Chapter 5 is of a statistical nature. It calculates the number of specific subjects which can arise in the field of Library Science by the application of the different problems enumerated in chapters 2 and 4 to the different kinds of libraries enumerated in chapter 3.

Chapter 6 examines the condition to be satisfied by a discipline to be admitted into the circle of sciences. An attempt has been made to show the extent to which Library Science satisfies these tests.

Chapter 7 is devoted to the enunciation of the fundamental Laws of Library Science. It gives a rapid résumé of my *Five laws of library science* in which they were first enunciated. A new feature is the Staff-Formula.

Chapter 8 examines the scope which Library Science presents for able men to occupy themselves in its pursuit. It also shows how the state of modern knowledge calls for a division of labour between those who work in the library on the one hand and those who work in the laboratories, factories, fields and offices on the other.

Chapter 9 shows how urgent the pursuit of Library Science has become in the India of to-day. It estimates the library man-power which India will require if she is to use her freedom to the best advantage of her citizens. Indeed it seeks to establish that national revival in India is dependent upon the promotion of a nation-wide library movement.

The appendix gives the regulations, the syllabus and the books prescribed for study for the Diploma and the Degree Courses in Library Science in the University of Delhi.

LECTURE 1

Library Science and Fundamental Values

(*Purusharthas*)

I welcome you to this degree course in Library Science. I admire your daring in offering yourself to library science. I call it daring because this is a very recently established discipline. My next desire is to tell you that you have not taken an altogether false step. Library Science has been recent, I said. By that I mean that the values which one can get by caring for it are taking shape only recently. Let me deal with each one of its possible values and show when that value began to appear.

11 Personal Profit

Surely, the pursuit of any subject must be for *swartha* (personal profit). The common unit by which all personal profits are measured is money. Let me therefore show you the history of the personal profit of the pursuit of Library Science, expressed in terms of money. In the beginning, a librarian's work had hardly any money value. In the history of the Library of the Christ Church College, Oxford, for example, you will find that the librarian had hardly any salary worth mentioning. It was often a student who was in charge of the library. This was the case with the libraries of many other academic institutions. A student took charge of a library, either because he was so poor that even the pittance of an allowance which he could get was of considerable value to him. Or it may be because he was a student with overflowing energy

and he wanted some extra work to let off steam, so to speak. The father of modern library science, Melvil Dewey, was himself a student-librarian probably for both of the above reasons. Even recently I read with some amusement an application for a library post, in which was emphasised, as one of the qualifications, the fact of having been a student-librarian. In other libraries, the librarian's work was not taken to deserve even the trivial sum paid to such student-librarians; and so somebody had to do it in an honorary capacity which means for no personal profit at all. If it was a college library, a busy professor was made the honorary librarian. If it was a municipal library, the over-worked Municipal Commissioner had the library as an additional charge. It is well known that in our own country such things are common even today. Superintendents of museums become *ex-officio* principal librarians of public libraries. In spite of the persistence of this order of things in our country, the practice of having properly paid librarians had begun in Western Countries two or three generations ago. In our country, too, the need to pay librarians, *qua* librarians, is being slowly realized, though the standard of payment is still miserably poor. But I do hope that in the new age which we have begun this month, all this anachronism will end and that when you enter the profession, you will find that Library Science too can secure *swartha* in terms of money like any other profession.

12 Social Well-being

Apart from personal profit, Library Science can also contribute to *samuhika-sukha* or social well-being. Historically the need for remunerating librarians, even as the members of other professions, was brought home only after it was realized that librarians backed by a well-developed Library Science, can add to the well-being of society itself. This realization came early in the nineteenth century. There is a very interesting anecdote

connected with it. To know that anecdote you must go with me mentally to the Glasgow of the early nineteenth century. In those far off days, Glasgow had no University. It had only a college. This college took on its staff a young graduate in science, Birckbeck by name. In those days even science was learnt by rote memory. You young people, who have had your laboratory work, will wonder how it could have been possible. I know that Delhi and other places even make you take an examiation in practical science. But in the days of Birckbeck there was no practical work for students. There was not even experimental demonstration by the teacher. Young Birckbeck revolted against it. He wanted to have at least a few demonstration experiments. To do that, he had to design every kind of apparatus from the simplest onwards. But the artisans could not make them properly. After investigation, he found that it was due to their not having any knowledge whatever of the elements of the science on which their own craft was based. They could only repeat wasp-like what they had inherited. And so he wanted to teach them the rudiments of science. I need not reproduce all the details of the anecdote. It is enough to say that the society of Glasgow-artisans soon perceived the superior advantage of such a knowledge and a large number of them began to crowd Birckbeck's classes. News of the consequent social betterment of the world of artisans of Glasgow reached London. There, another youngman, Lord Brougham, had been thinking along similar lines. The two joined hands and established the famous Society for the Diffusion of Useful Knowledge. A large number of popular books came out. They were organised as libraries and the service of those libraries was eagerly availed of by the workmen. This new movement was copied in most of the towns. The social betterment, which flowed from this movement, soon became so arresting that a Library Act was passed and that a paid library profession was established. In

our own country, we are on the eve of such a development. The changes that have come over our society during the last week will, without doubt, call for every agency that can add to social betterment. It may be that our leaders are now too pre-occupied with the things of the moment and are unable to turn their attention to those factors which alone can ensure progressive, permanent, social betterment. They are so overwhelmed, I am prepared to grant, with acute problems which demand an immediate, though temporary, solution. But this will not endure; they will soon realise it. I wish they do realise it before a damaging crash sets in. Take the food problem, for example. Importing food grains cannot be a permanent solution. A new scientific pursuit of agriculture alone can give a permanent solution. Preparation of our farmers for intensive farming will not be possible unless they are fed continuosuly with the latest information on the subject. They cannot be so fed unless we have libraries of the right kind. Libraries will not be of the right kind unless they are run by persons who have specialized in Library Science. Or take our clothing. The shortage of yarn and cloth cannot be permanently removed and society cannot be better clothed merely by bringing them on board the ship from the West to the East. Our society must produce better spinners and weavers. To produce them, continuous and intensive training in the latest methods will be necessary. The methods will have to be improved continuously. This again will require libraries of the right sort manned by library experts of the right sort. If you look at the history of any nation, that has secured social betterment, you will find that one of the links in the chain of the agencies employed for the purpose, is the library. The United States, for example, publishes a kind of irregular yearbook which lists more than two thousand industrial concerns. Most of these concerns describe the industrial research being

promoted by them and they also mention the business libraries maintained by them to promote that research. I say that independent India cannot long delay realising the urgency for establishing libraries of the right sort, manned by daring souls like you who have had arduous, full-fledged training for at least two years in Library Science. She cannot make any progress without a public library system. When she realises—and she will soon do so—that her social betterment can not be achieved without libraries and the service of Library Science, then will her leaders and people appreciate the far-sighted step which the Delhi University has taken and the wisdom of Sir Maurice Gwyer, its Vice-Chancellor with vision, in advising this University to institute a Degree Course in Library Science. If the Government is taking a correct view of the methods of improving our society, it should have itself demanded a degree course in Library Science from the Delhi University. All honour to Sir Maurice Gwyer and the Delhi University for having instituted the Degree Course in anticipation and even without the gesture of any help or encouragement from Government. Surely the Government should have seen that Library Science is as essential, if not more, for the all-round stepping-up of our national life—for *samuhika-sukha*—as Russian or French which can have no significance for the masses.

13 Creative Joy

I next pass on to a third purpose which the pursuit of Library Science can serve, and that is serving as a means for the reaching of the intellectual destiny of a person by creative work of some sort. Money and what can be bought with it can only bring happiness—happiness which is short-lived and fleeting, which dies with the materials which bring the happiness. It is only creative work that can bring lasting joy.

This is *pramoda*. This fulfilment of one's intellectual personality by creative work is the *swiya-dharma* or the individual's distinctive duty to himself. I claim that Library Science will give you as much opportunity as any other subject for your entering on the creative phase of your life. I am sure you will realize it before you complete your two years' course. I do not say that creative ability will manifest itself in the case of every student. It does not happen in any subject. The probability for it is always small for any subject. If you are a very large class I can be quite sure of some of you realising also this third purpose of the pursuit of Library Science. But as you are a very small number now, the probability is also very small, but the possibility is still there.

14 Fulfilment of Nation's Mission

There is a fourth purpose similar to the third. It is *desiya-dharma* or the fulfilment of a nation by making its distinctive contribution to world's knowledge and welfare. This has, of course, to be the cumulative result of the creative work of its individual citizens for several generations. But there is a particular field in which each nation can be at its best, make its distinctive contribution and thereby fulfil itself. To give an example, let us take the breaking of the atom. It had been known for some years that the atom was breakable and that the energy which could be released by it would be enormous. By breaking one atom, for example, it might be possible to keep Delhi electrified for several years. An act like that would be of immense social value. One need not dehumanise humans by sending them down the pit, rip open the earth and bring out dirty coal or nauseating petroleum. It is true that, due to the ethical and spiritual immaturity of the nation which succeeded in breaking the atom, the energy so

released for the first time was turned on devilish human slaughter on a mass scale. But that will soon be set right. Though the possibility of breaking the atom had been mathematically established more than a generation ago, the engineering feats required to realise it in practice had been formidable. It was left to the United States to achieve this feat and thereby make the world for ever a debtor to it. In this the American nation has fulfilled its *desiya-dharma* in a field germane to it.

India too has fulfilled its *desiya-dharma* in some fields in the past. In the field of mathematics she had contributed the numerals which have come into universal use, and the notion of zero and negative numbers. Panini's system of grammar is still the best model going. India's distinctive contribution to metaphysics and her record in mystical experience are so well-known.

In our own days Mahatma Gandhi has enabled her to attain a similar fulfilment in the forging of a new political technique.

Nearly contemporary with this was a similar attainment by England and Germany through the personalities of Darwin and Einstein respectively. Evolution and relativity have now got ingrained in the mental make-up of most thinking men of today.

In a similar way in the latter half of the nineteenth century, through Melvil Dewey, the father of modern librarianship and his devoted band of associates, the United States had moved towards the attainment of its mission in another field, the field of Library Science. The time has come for humanity, to take another leap forward in this very field. Who knows that the School of Library Science of which you are pioneer members today will eventually turn out to be the agent through

which India can take that leap forward and thereby enrich the fulfilment of India's mission in this field. To this end I fondly hope that this University will allow this Department to enroll and train students in research and prepare them for Doctorate in Library Science.

Library Science comes into this picture in another way. Whether a nation is destined to fulfil its mission by lifting Library Science to a higher potential or not and whatever be the field of knowledge towards which its mission gets gravitated, its fulfilment will have to depend on a long chain of events, personalities and institutions, one inevitable link of which should be its library system. Therefore, Library Science will in any case contribute indirectly at least to the attainment of the *desiya-dharma* of every nation.

15 Delight of Release

I come now to the fifth and the final purpose for which Library Science can be pursued. That purpose is unlike gaining the fleeting happiness or *sukha* or the somewhat more lasting and yet perishable joy or *pramoda*. It is on the other hand the attainment of delight or *ananda* which never perishes—which is eternal. Eternal delight is the right of every soul.

Its occultation at the moment is caused by non-eternal elements. Attaining delight, therefore, means rising beyond or piercing through such obstructions. Usually a technique for effecting this, is absorption or *laya* (at-onement) with some subject of contemplation. Library Science, I am quite convinced, is second to none in the world in being a fit subject for the *laya* which can release the soul from bondage into a delight that can land us in *atmavimochana* or *moksha*.

16 Indian Tradition

Those of you, who are familiar with Indian tradition, would have seen that the train of my thought has gone along a well-known path, the path of *purusharthas* (the fundamental values of life) *Dharma*, *Artha*, *Kama* and *Moksha*. The first purpose, I have described, belongs to the category of *artha* (wealth). I have shown you that India has already begun to invest Library Science with this value. I am sure, none of you will miss getting the value if only you sincerely dedicate yourself to the subject. The *samuhika-sukha* or social betterment belongs to the category of *kama* or happiness in the vital plane. I have shown you how urgent is the service of Library Science to our Motherland in this respect. My appeal to you is that you should not stop with the first value, but you should all work for the second value also. The third and fourth purposes belong to the category of *dharma* or (creative) work and the concomitant is *pramoda* or joy. Nobody can foretell which of you will be able to realise this value. I only wish that some of you at least do. The fifth purpose of the pursuit of Library Science relates to the category *moksha* or Release and its concomitant is *Ananda* or Delight. You may wonder whether *moksha* can be attained through the pursuit of Library Science. I don't doubt. I am a pronounced optimist. I am convinced and I do believe that undivided devotion to Library Science can lead to *moksha*, that is, land one in Ever-lasting Delight.

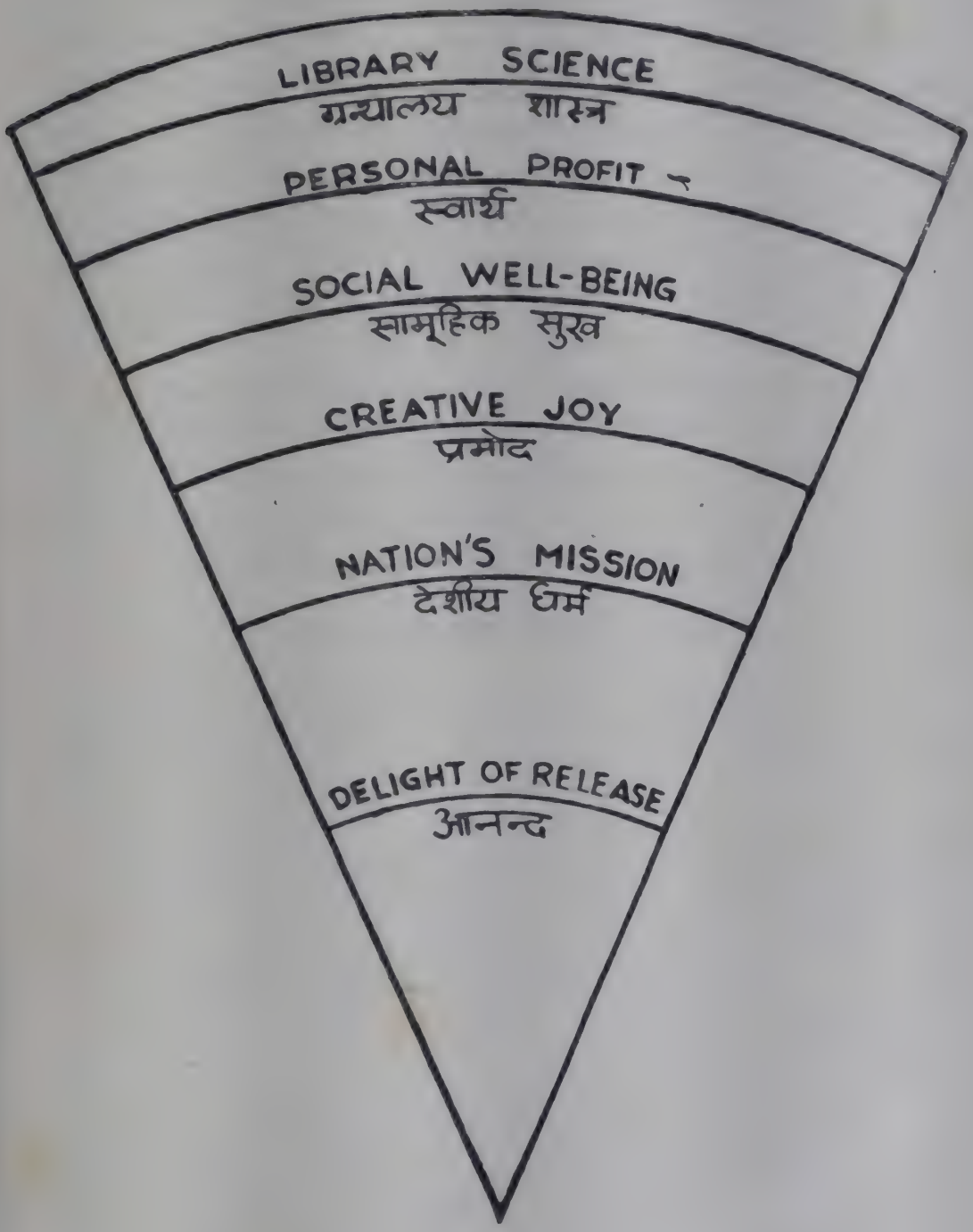
17 Library Science Subtends All Purposes Equally & Simultaneously

I see young faces beginning to look suspicious. I hear somebody whispering: "Have I come to the degree course in Library Science to become a recluse, a fakir or a sanyasi!"

I can very well understand the danger of this first talk of mine scaring you away, because *moksha* is mentioned. Don't make that mistake. These five purposes are not mutually exclusive. They all co-exist whether you care to recognise them or not. Turning your eyes to one of them does not mean turning them away from any other. You can have all of them in the forefront of your ambition with equal intensity at one and the same moment and all through life. If you are not afraid of a geometrical term and a geometrical representation, I shall give you a diagram which will bring home to you the truth of this statement. In your childhood you should have learnt the geometry of the circle. You should have heard of an arc of it and the angle *subtended* by it at the centre. Now an angle at a point can be subtended simultaneously by arcs on different concentric circles, with equal completeness, if they all have a common centre. Look at the diagram in the next page. Library Science is the angle; it can subtend and does subtend all the five purposes as shown in the diagram. The fact that it subtends the fifth purpose does not interfere with its subtending the first purpose and *vice versa*. This diagram is a schematic representation of the fact that you can, by the sincere, continued, and intelligent pursuit of Library Science, achieve silmultaneously worldly goods, credit for social reconstruction, creative joy, credit for having contributed to something creative done by our nation as a whole, and the realisation of eternal delight.

18 A Subject of Unknown Potency

Do you think that I have sung the praise of Library Science in too high a pitch ? Perhaps you do. At any rate I don't blame you for this at this stage. I don't want you to be credulous. You can begin at least with the faith in the first and the second values and suspend your judgement about the


LIBRARY SCIENCE
ग्रन्थालय शास्त्र
PERSONAL PROFIT
स्वार्थ
SOCIAL WELL-BEING
सामूहिक सुख
CREATIVE JOY
प्रमोद
NATION'S MISSION
देशीय धर्म
DELIGHT OF RELEASE
आनन्द

other three values till a later date, till you complete the Degree Course. I said that I do not blame you, because I have known from experience how even older people—even people with more learning—are ignorant of these values. When I myself turned my loyalty to Library Science a quarter of a century ago, two old gentlemen -- learned gentlemen -- pitied my lot. One was the Principal of the College in which I was teaching and the other was the Principal of the College where I had studied. Both were sincere well-wishers of mine. It was their sincerity which made them condole with me for having been relegated to worship at the altar of Library Science. That was because in those far off days nobody in India had known the potency of Library Science in the field of all the four *Purusharthas* (fundamental values of life). Let me make a confession; I too was equally ignorant. I was as credulous as some of you are today. This fact should, I think, add weight to my testimony.

19 A Subject of Unknown Content

There is however one piece of warning, I should give. You may find your friends and relatives shrugging their shoulders and glancing at you with a cynical eye when they come to know that you have taken to Library Science. This was a very common experience of my students when I began teaching Library Science twenty years ago. Their cynicism reached up to me also. They used to compare me with the Aesop's fox that had lost its tail. They used to attribute selfish motives to my attempt to establish a Library School. They used to say that I wanted to hide my discomfiture by enticing young men to lose their tails also. Many parents used to dissuade their children from joining my school of Library Science. If a student did not pay heed to the advice and insisted on joining the school, and if the father was a cruel man, he would virtually disown him and cut off supplies; if he were a fond father, he would at least say, "I

don't want to look at your face till you get weaned away from that company."

This is no wonder; because even university dons, professors in charge of long-established subjects, resist the inclusion of Library Science in the curriculum of the University. Many sneer at the very idea and some would even prefer a ton of books locked up in shelves to a teacher of Library Science being added to their group. Indeed they would fain weigh a teacher of Library Science against a heap of library books in assessing the value of Library Science.

All this can only be due to an ingnorance of the contents of Library Science and particularly of its cultural value as a discipline. But I find that in Delhi, at any rate, things have improved very much. I am made to say that because I have seen brothers, fathers and husbands of young boys and girls coming to Mr. Das Gupta in person and asking for a seat in the degree class in Library Science. I don't know how much of this solicitude for Library Science is traceable to this University having boldly admitted Library Science into its ring of high -brow subjects.

Whatever may be the cause for the change of attitude in elders, it is but proper that I should give you true and factual reasons why Library Science is worth pursuing. I should give you at the outset a general picture—an aerial view so to speak—of the field of Library Science. I have given you today such a view—perhaps, from too great a height—from the stratosphere so to speak. I propose to give you in the second lecture a nearer aerial view where details will be visible. I would ask you to peruse to-night this syllabus which is being distributed just now. (See the appendix). This syllabus will give you an atomised view of the field. A syllabus is virtually a legal document

and for purposes of the regulations it has cut the field of Library Science into several sections and suppressed their inter-relation. But in the next lecture, I shall show you the syllabus as an integral whole and indicate how the various details which stand apparently detached in cold type, do flow holistically from one central idea which is the soul of Library Science.

LECTURE 2

Field of Library Science

An Approach from the Side of Books

In the first lecture, I gave you a view of Library Science from the very distant height of the fundamental values of life. While at such a height, no details could attract our attention. All that we had was a feeling of the fundamental values. We must reach nearer and nearer to the field to perceive the details. I wonder whether you have ever approached a big city from a great distance concentrating your thought on the order in which the details emerge. To get a true picture of such an experience we should really go to our premier poet. We should turn to the pages of Valmiki's *Ramayana*. In its *Sundarkanda*, Hanuman approaches Lanka. The poet describes graphically the order in which Lanka puts forth its details. From a very great distance, it is only a hazy though pleasant patch that is visible, suggesting the possibility of its being inhabited. The view of Library Science I gave you yesterday corresponds to this stage of Hanuman's approach to Lanka. As he went nearer, the towers and the turrets, the hillocks and the valleys, and the land and the water formations of the town became visible; but it was not clear how the lay-out of the town embraced them; They were all visible only disjointly. It was the physical geography of Lanka in its crudest form that was visible; the human geography had not yet come within the view; still less was the movement of the people discernable. The perusal of the syllabus, which I gave you yesterday, would have given you only that kind of incomplete view of Library Science. In the next stage the poet takes Hanuman round the streets of

Lanka, takes him into the palaces and gardens and makes him see every possible detail. The nearer he comes, the greater are the details visible. To give an example, a statue of Lakshmi attracts his attention. As he approaches it, the hands of Lakshmi are visible. As he comes still nearer, the lotuses in her hands become visible and so on. Such minute details you will be able to perceive and enjoy in the course of the next two years with the help of the various lecturers. But today I should like to begin with you the first exploration, without going into too great details, of the field of Library Science. Let us walk now towards and into a big library.

21 Library Buildings, Fittings & Furniture

What is it that first strikes your eyes ? Surely it is the building—every library should have an attractive, beautiful, inviting building. As soon as you enter it, it is the massive counter, the handsome shelves and the smart looking tables and chairs that catch the eye—library fittings and furniture should indeed induce in us a sense of pleasantness and invite us to settle down in the library and use it. And so one of the branches of the Library Science is "1 Library building, fittings and furniture".

Next we are attracted by the readers crowding in the library, the books settled happily in their hands and the inumerable books looking eagerly from their places in the shelves to the reader who would touch them, take them out and enjoy their company. Next to the building then there are two elements to call our attention almost simultaneously—books and readers. We can deal with only one at a time.

Let us follow the books first. I know that to many of you, the first thing that comes to mind when the word library is uttered is 'books'. If this association of ideas makes you

define a library as a collection of books, I must at once warn you that it is wrong.

For a library is more than a collection of books. It needs readers as much as books to make a library. However I have no objection to begin the next stage in exploring the field of Library Science by following the track of books. Yes. We want books in the library ; we expect to find them there. Let us think a little and see how they come there ; what the librarian does to get them in.

241 Book Selection

The Class : By buying them.

I think the librarian will have to do something prior to buying them. Can you guess what he should do in order to buy them—as a preparation to buy them—and, so, even before buying them.

The Class : He must select them. Yes. "41 Book selection" is a topic which you will have to study in Library Science. I am sure that you know that the number of books available in the world is enormous. No library in the world will be rich enough to buy every book. So book-selection is, thus, inevitable in every library. To build its collection, every library should begin with selection. This subject of book-selection will include determining factors like finance, availability of books, choice of editions, language of the people of the locality, local trades and interests or the subjects which are likely to engage the thought of the clientele, of the library and so on. It will also be necessary to learn the routine involved in book selection.

242 Book Order

Let us suppose that we have made up our mind as to what books we should own. What should be the next step ?

The Class : Give them to readers.

Give what ?

The Class : The books.

Where are the books ? We have only decided what books to have. Should we not actually have the books before we can give them ? What is it that we should do to have the books ?

The Class : Buy them.

Yes. "42 Book order" is a subject forming part of Library Science.

243 Periodicals Work

At this stage I must tell you something which you might not have thought of. Generally when you speak of buying books, you are thinking of complete books, with title-page and index and properly stitched and bound. But a library has often to buy publications which do not come out whole as an egg. There are publications of which we are obliged to buy a few pages at a time—say the first 40 pages in the first month, the second 40 pages in the second month, pages 81 to 120 in the third month and so on. It takes a full year for the volume to be completed. It is only thereafter that the title-page and index become available. When these arrive the library has to assemble all the pages properly, make a volume and get it bound, before it can be put on the shelves along with the other books in the library. I wonder if you have ever come across a peculiar publication of this sort, and by what name such publications go.

The Class : No.

I am surprised to hear "No" from you. Surely you have read them. Only you have not observed them with care. Let me help you to recall your experience in the matter. Go back to your college days. Did you never have such a thing as a

reading room in your college or hostel ? Can you not recollect some unbound paper-covered material which you used to read with great interest in the reading room ?

The Class: Yes, *Modern review.*

Did you ever examine the pages of the different monthly parts—issues, fascicules, these are some of the words which are used to denote the successive parts of a volume—of the *Modern review!*

The class: No

You take it from me and verify afterwards. Pagination runs continuously in the successive parts. Surely you should also have seen a complete bound volume of the *Modern review.* Who do you think could have transformed the paper covered, stray issues of the *Modern review* which you used to meet in the reading room month by month—who could have transformed them into the bound volume looking quite a book which you occasionally pick up from among the books arranged on the shelves ? I know, you would not have thought of connecting the loose numbers and the bound volumes of the *Modern review* ! But let me tell you that when you become librarians it will be one of your arduous tasks to deal with this class of publications. In library parlance, they are called periodicals. Periodicals are prone to all kinds of diseases. The parts of a periodical may not be published according to the announced time-table. Some of them may go astray in post. You will have to be very watchful and make sure that every part does arrive at the library. When a volume is completed you must assemble all the parts, attach the title-page at the front and the index at the end, see that all the pages occur in proper order and get the whole thing bound. Of course you have to pay the subscription at the proper time. Many periodicals have auxiliary publications like cumulative indexes and supplements. You will have to be on

the look-out for them and acquire them in order to make the library's set of the periodical complete. All this work goes by the name of "43 Periodicals Work"—another subject forming a part of Library Science.

244 Accessioning

Let us assume that the books have arrived and that the completed volumes of periodicals have been bound and included among books. What should be our next work with them ?

The class : Give them to the reader.

Another student : Put them on the shelves.

No, no. You are too hasty. Books know better. They would refuse to go to the shelves or to the reader. They refuse in the interest of the librarian himself. If you have bought a book for your private use, you can straight away put it to use or put it on the shelf. But in a public institution -- a library is a public institution — you must do something with the book before you bring it to use. You have to do it with all things which you buy for a public institution whether it is a book or furniture, or stationery or machinery or tools, in fact all the materials acquired for a public institution can be put to use only after some preliminary work is done for them. Try to guess what it is.

The class : We must list them.

You are right. 'List' is too common a word. It is usual to use a technical term to denote it. Can you not guess it ?

A student who had been in business for two years : Enter them in stock register.

Exactly. That is what business people say. The library profession is too aristocratic to share that common word with traders and merchants. It calls this work "44 Accession Work".

Accessioning is not merely entering into stock register. Even when this University buys furniture—chairs and tables—entering them into stock register involves more than writing the stock register. Can you guess what is the work that is involved ? Look at the backs of the chairs and tables which you are using. What do you find ?

The Class : D. U. followed by numbers.

What does it signify : What do these symbols represent ? D. U. represents Delhi University which is a mark of ownership and the number represents—

The class : The serial order in which the chair was received.

Yes. Every article purchased in a public institution must receive a mark of ownership and a serial number. So with books also. The name of the library should be stamped in several standard places of the book. The serial number is called the Accession Number in Library Science. It is at this stage that payment will be made for the books. Books are not like chairs and tables. As I have already told you, several of them come in parts. Sometimes several little books may have to be bound together and numbered as a single book. Conversely sometimes a big book may have to be split into several books and assigned many different accession numbers. You will know more about the difficulties of accessioning in due course. Let us now pass on with the books and see what the library does to them next.

245 Preparation of Books

Books are not fit to be handed over to readers or put on the shelves even after accessioning. They have to be prepared before they are released to move forward towards their destiny, which is no doubt the readers' hands. Can you guess what sort of preparation I mean ? If you have ever borrowed a book from your College or School Library, tell me if you have found

in it anything which you do not generally find in your own private books ?

The class : A library stamp and accession number.

Yes. But we have already mentioned it. Nothing else ? Nothing at the end or the beginning of a book ?

The class : Yes. A sheet showing dates and a pocket has to be fixed; the book card is to be written and inserted in it.

You would have also noticed a label pasted on the spine —near the bottom of the spine of the book with a number written on it. That has to be done. Very often the pages in the books are uncut. If the book is released in that condition readers may tear pages with their fingers or pencils and injure the edges. I need not go into all the details now. It is enough to say that a necessary item in library work is "45 Preparation of Books." Let me say that this is only preparing the body of the book.

255 Library Catalogue

A book has to be prepared in a still another way. The librarian will have to do something more with the book before releasing it for use.

The class : Catalogue them.

Yes. "55 Library Catalogue" is a considerable branch of Library Science. I don't think you would have realised what an efficient, and yet complicated, tool a library catalogue is. There are many varieties of it. It implies a mastery of an elaborate set of rules. It needs considerable practice to prepare it. A large part of your time will be devoted to learn the art of cataloguing. The preparation of the catalogue also amounts to preparation of the books. However it is not like the preparation we discussed a few minutes ago. That preparation was concerned with the body of the book. But this is not so. Tell me, with what factor it is concerned.

The class: Its contents; its subject matter.

Yes. May I put it this way: It is concerned with the soul of the book. It is not only the body of the book that requires preparation, but the library must do some preparatory or preliminary work connected with its soul also.

251 Library Classification

There is also another more arduous work relating to the soul. Let me see whether you can guess it. Try to recall to mind any occasion when you went to the library. Tell me how you asked the book you wanted.

The class: I copied from the catalogue the name of the book I wanted and gave it to the librarian.

I don't ask about the procedure you adopted. Have you never gone directly to the shelf without writing a slip or asking the librarian for help. I am glad to hear that you have done so. How did you conduct yourself to the particular book you wanted? Surely you looked for the shelf which contained the books on your subject. Suppos you are a student of Physics, you went to the shelves containing the books on Physics. You found that all the books in it were on Physics. Probably you believed also that all the books that the library had on Physics could have been placed there and nowhere else. As new books in Physics were brought, you were sure that they would have been brought to these shelves. As your class-mates returned the volumes on Physics borrowed by them day after day and hour after hour, you would have seen that they were all unerringly brought to their proper places. How do you think you can maintain correct order on the shelf in this way? It is not as simple as you suppose it to be. If you have only a dozen books to keep, it may be a simple affair. But if you have say 50,000 volumes to manage it is sure to become a difficult, if not an impossible, task to preserve their preferred order. And

yet the libraries succeeded in this difficult job. How do you think they do it ?

The class : They have a way of numbering the books. We find the number on the backs of the books.

Yes. These numbers play a vital part in library work. They are called Call Numbers. Giving these numbers is an arduous piece of work. It is called Classification. "51 Library Classification" is the most profound and fundamental branch of library science. An acute and analytical brain, great familiarity with the world of knowledge and books, and a severe and prolonged discipline are necessary to gain mastery of library classification. This subject will, therefore, call from you not only industry but also prolonged preparation, throughout your course. Indeed you will learn as you go forward, that this is a subject which bristles with difficulties' which has many unsolved problems, and which will call for a complete burning of boat and starting afresh at least once in a century. You will also find that it permeates every other branch of Library Science—nay every branch of thought and every walk of life.

26 Circulation work

Now the books are ready to go out to readers. But they can't go out promiscously. Their going out must be properly regulated. It must be properly recorded. There must be a proper mechanism or device for keeping track of them and of ensuring that they come back to the library. The work connected with this phase of Library Science is called "6 Circulation Work"

272 Library Publicity

But just think for a while. Can the books circulate by themselves ? Will every book find its reader if you do not help

it ? Can every reader find his book if you do not help him ? You are facing here a problem which is quite common in the business world. If you are selling some articles, do you leave it to chance for somebody coming in and buying it ? Or do you make any special effort to bring your goods to the notice of the public? What do you call the special work ?

The Class : Advertisement.

Yes. There is a more dignified synonym for it. We prefer to call it "72 Library Publicity".

27 Reference Service

Publicity work is intended to make people accept the service of the library, take advantage of its book service and above all come to the library. But that is not enough. When the customer comes he must be attended to properly. Indeed there are so many subjects on which a library has books. On each subject it has a variety of books, in all sorts of standards and dealing with the subject from so many different angles. There is also the problem of the large number of volumes in a library—several miles of books—which is likely to baffle any reader. Books do require interpretation to readers. They do depend on the librarian to canvass the right reader for them. Even in advertisement, don't you know that there are two methods—the impersonal advertisement through newspapers and posters and the personal canvassing. Surely the latter is more effective. In the latter the canvassing agent can vary his mode of appeal according to the circumstance of each case. Suppose you are a canvassing agent for Horlicks milk, if you approach a potential customer and you find a doctor coming in, you would probably say that Horlicks is best suited for sick people. If on the other hand you find a baby in arms in another house, you will impress on them that Horlicks is the best form of milk for infants. This kind of personal service is necessary to make books circu-

late and to make the people of the community more informed and efficient. What will you call this department of Library Science ?

The Class : Canvassing department.

No. No. I told you that librarians are very aristocratic in their language. We don't share our terms with the common trader. We call it by the dignified name "7 Reference Service".

28 Shelf work

Lastly we have to see that the books are properly housed and properly displayed. Book-display may appear like part of publicity. It is, but not in the narrow sense. Book-display here does not mean putting a few books in the shop-window. The entire stock has to be ever on display. This requires great ingenuity, many guides, and frequent variations of them. All this work along with the routine connected with the maintenance of the correct order among the books and their maintenance in a healthy physical condition goes by the name of "8 Shelf Work".

I have now taken you through the highways and by-ways of the work in a library. Incidentally I have also enumerated 12 items of work which one has to do in a library. Of these "6 Circulation", "7 Reference Service" and "72 Publicity Work" had taken the readers and books together. But we came across them as we followed the career of the books within the library. In other words these are the branches of Library Science, which become visible when we approach it from the side of books. On the next day we shall approach our science from the side of the readers and see what new branches become visible.

29 Summary

Let us close to-day's study with an enumeration of the twelve problems which we have isolated so far :

1	Library building	51	Library classification
41	Book selection	55	Library catalogue
42	Book purchase	6	Circulation work
43	Periodical work	7	Reference service
44	Accession work	72	Publicity work
45	Preparation of the book	8	Shelf-work

LECTURE 3

Field of Library Science

An Approach from the Side of Readers

Today, we shall approach the field of Library Science from the side of readers. We shall be led, by this approach, to recognize different types of libraries; we shall also examine, with regard to each such type, the following six questions :—

(1) the dominant class of persons to be served;
(2) ownership;
(3) finance;
(4) the kind of books to be collected;
(5) the nature of the service to be rendered; and
(6) building.

I may say at the outset that we shall confine ourselves to the largest political unit possible now, *viz* the nation. For definiteness, we shall have the Indian nation in view. But it is merely taken as a sample. All which we say will be equally applicable to any other nation.

311 National Library

Let us first think of the type of libraries which will have the entire nation as its clientele. Can there by any such library ? If there is, any citizen will have the right as much as any other to its use; it must then be a huge library; and it must also be one which grows very fast. Have you heard of any such library in India ?

The class : The Imperial Library.

Yes; that adjective, however, is an anachronism. We are now on this side of the zero hour.....15th August, 1947.

The new Government has not yet had time to change all such offensive epithets. By what word do you think, "Imperial" should be replaced ?

The class : 'National'.

That is right. The first and the grandest library which we can think of within a nation — the premier library of the nation — is the National Central Library. The Imperial Library at Calcutta was intended to have been the Indian National Library. I say "intended" because the rules contemplated the lending of its books to any citizen of India, no matter where he lived. The word "intended" has also the suggestion that it is an unfulfilled intention. Though it is nearly half a century since that library was established by Lord Curzon, it has not progressed very much towards the *de facto* fulfilment of that intention. Its book-fund had always been miserably poor. Its annual accession minus the Government publications has always been despicably small. Nor has any adequate attempt been made to invite the citizen of India to use even its meagre resources freely and widely. No doubt the official gazettes of the provinces do contain an insertion about it. But you know what circulation these gazettes have and among whom they circulate ! Not merely the circle of its readers, not merely its stock of books, but its buildings too are hardly worthy of being called 'national'. The fact is that we have a national library only as a ritual appendage. But it is not so in most of the countries. Great Britain cherishes the famous British Museum Library as its National Library. It has more than 50 miles of books. Its reading room has been the scene of many many attempts at creative work. Its reading room, though functionally antiquated today, is a beautiful piece of architecture, worthy of the nation. Its furnishing is quite up-to-date, and is calculated to give the greatest comfort to every reader. The United

States of America too is proud to possess a National Library which is worthy of its wealth. It is technically called the Library of Congress, as it is attached to the legislature of that nation, due to historical reasons. It has already overtaken the British National Library both in the size of its collection and its rate of growth, though it is nearly two centuries younger. The French Nation calls its national library by its right name.....Bibliotheque Nationale. The National Library of Russia at Moscow has, since the great revolution, beaten the National Central Library of every other nation of the world in almost every respect. Let us hope and pray that the independence which India has now got will enable her to build a National Central Library worthy of her great heritage, worthy of her great size and worthy of the great future which is before her. As such a library is yet to be conceived, established and developed, I have done my humble duty towards it by forwarding to the Government a full-fledged *Memorandum on the National Central Library.* I am having every hope that the Department of Library Science of the University of Delhi will be the one direction in which the Government of India will have to look for the men with the vision and the skill necessary to build it up. I am sure that the joy of developing our National Central Library will go to some of you and some of your successors.

Let us switch back from this direction. Let us examine the National Central Library from the angle of each of the six points which I enumerated at the beginning. What is the class of people whom it should serve ?

The class : All the people of India.

Yes. Let us make explicit all the implications of the phrase 'all the members of the Indian nation' as I would put it to you. Can you guess the implications ?

The class : It will not serve the foreigners in India.

I don't know whether it is necessary or wise to interpret the word 'national' in this restrictive manner? If we call a library 'national' in the sense that it serves the 'nationals' of the country, we need not import any restrictive meaning into the word 'national'. Our ancients have given us a science '*Mimamsa Sastra*' which has given us what are known as '*Mimamsa Nyayas*' or maxims of interpretation. One of the maxims would help us to widen our views and to avoid any tendency to narrowness and exclusiveness while using the term 'national' in a context like the present one. They call this Nyaya *Amravananyaya*—the Maxim of the Mango Grove. What does that maxim say? When you call a grove a mango grove, you are by no means suggesting that it contains no trees other than mango trees. All that you mean is that the dominant group of trees is the mango group. If your host takes you for an evening stroll into what he calls his 'mango grove', surely you won't be shocked to find a few cocoanut trees and even margosa trees in that grove. You won't suggest to your host that he should root out all those other trees. Remember this '*Amravananyaya*'. There is nothing to prevent our National Central Library serving the few aliens that may happen to live amongst us either permanently or temporarily from time to time, or even from occasionally serving foreign lands. As you said that the National Central Library of India should serve all those who are members of the Indian Nation, I asked you to make explicit all the implications of the word "all" in order to get an extended view of the service of the National Central Library. It is an irony that your reply should have gone the other way round and suggested a restriction. Attempt again, having in mind all that I have told you now.

The class: Our National Central Library should serve books also to those Indians who are abroad.

I agree. But to what degree will this extend the service of our National Central Library? After all what is the percentage

of our Nationals in foreign lands who will be depending on the service of our National Central Library? Even in their case, do you think it will be practicable to make our service reach them! Will it not be more appropriate that reciprocity should make the foreign National Central Library concerned do for our nationals in its area, all that we are prepared to do to their nationals in our land?

Think again as to how you can get a really extended view of the source. You must practise what is called *Kakakshigolakanyaya* or the Maxim of the Eye-ball of the Crow. If you don't find what you want to find in looking in one direction, you must turn your search in another direction. You have been trying to find the implications of "all" by searching space as it were. You had divided all space into 'India' and 'outside India'. When you searched inside India we were led to realise that 'all' should be extended to mean the few aliens inside India. When we turned our search to the region outside India, we were led to realise that if at all we can add only just a few to the import of 'all'. You have thus exhausted all that you can add to the 'all' by searching through the axis of space. I have told you that I am not satisfied with what little this search through space-axis is able to add to the 'all'. I say apply the 'Maxim of Crow's Eye-ball' and turn your search away from the space-axis —along some other axis—say, along the time-axis. Now tell me whether you don't get an infinite rise in the content of "all".

The class: Future generation.

Exactly. 'All' includes not only the present members of the Indian nation but all the future members of the Indian nation as well. This is a productive way of extending the meaning of 'all'. Let us examine an important implication of this new meaning of 'all'. The books in a National Central Library

re intended for the use of not only our contemporaries but of ll the posterity -- say of the people of India in 6000 A. D. as vell. This is a great responsibility. What is this responsibility of the National Central Library as regards its books? Surely, t must preserve its books. It should see that none of its books s worn out rapidly. Here we seem to land in a dilemma. If we encourage the use of a book among the present generation, there is the danger of its being worn out far too much to be of use to the future generation. If we keep it aside for the future generation, we deny its use to the present generation. A compromise is practised by National Central Libraries to meet the situation. They do not totally deny the use of a book to any contemporary; but they put some restriction so as to minimise the risk of its being damaged and thus to increase its life as much as possible. The risk is greatest when the book is sent out of the library for use and return. If this extra facility is denied but the book is made available for consultation within the library, the book can serve the present as well as the future generation. In fact this is what most National Central Libraries do.

I think no great argument is necessary to establish that a National Central Library of such a range should be owned by the nation and financed by its Government.

We have now exhausted all that we can get out of the word 'national' when we apply it to the readers. But don't forget that a library consists not merely of readers but also of books. Let us therefore once again apply the *Kakakshigolakanyaya* (the Crow's Eye-ball Maxim) and turn our thought from readers to books and examine what light we get. What is the class of books which a National Central Library should go in for?

The class : All books published within the country.

Yes. What more? Step outside the country and see what books published in foreign lands it should acquire in order to deserve the name 'national library'.

The class : Books published by Indians abroad.

Yes. But will you not include all books published *on* India, abroad? If you agree, we may adopt the formula that a National Central Library should acquire all books *by* all Indians and all books *in* and *on* India? This gives you a better picture of the duty of a National Central Library with regard to its acquisition of books. But you have not yet got the full picture of it. Should not a National Central Library guarantee to anybody in the nation the supply of any book whatever—not only books in, on and by India and Indians, but also any book wanted by anybody in the country on any subject whatever and published in any land and at any time whatever? Yes ; it is the duty of the National Central Library to do so. If the National Central Library does not meet all the book-need of the nation, which library can? You have now got a full view of the book-collection of the National Central Library. You will not now be surprised to be told that the Library of Congress adds more than a lakh of books every year. When will the National Central Library of India be established ? When will it grow at that rate ? When will the Indian nationals become peers of the American nationals in their book opportunity ?

We have now reached a point in our conception of the National Central Library from where we can look at the sixth point, namely the nature of the library building. To design a building for a library which acquires more than a lakh of books every year, is not an easy matter. The National Central Library of America which started with 6,000 volumes early in the 19th Century has already crossed the three million mark. In fact the problem of building and equipment takes a

colossal form when applied to a National Central Library. It will call for the best engineering skill, the highest architectural acumen and the most daring library vision.

312 National Lending Library

We saw in our discussion of the National Central Library that the extension of the term "all citizens" along the time-axis obliged the National Central Library to deny loan of books to anybody. This is a serious in-road into the book-rights of a citizen. This must be obviated. About thirty years ago, Great Britain hit upon a plan to obviate it. Thanks to the daring vision of Albert Mansbridge, the president of the Workers' Education Association, the National Central Library for Students was started in London. It has since received a Royal Charter. What is its 'class of readers'? It consists of all persons, no matter in what part of the country they may happen to live, that want to borrow books that could not be procured from their own local libraries. From this it follows that the books it purchases will be only those that are so required. Its collection, therefore, will not be a balanced one. It needs no saying that its collection will not be exhaustive as that of the National Central Library. Though it was established by private enterprise in England, though it is still largely dependent on private benefactions, I am sure you will grant that the appropriate authority to own and finance it should be the Government of the nation. India, at any rate, will have to build up this type as a part of its National Central library on that basis.

313 Copyright Library

When we were discussing the first type—the National Central Library—we saw that it was its duty to buy all books in, on, and by India and also all those foreign books that are wanted by Indians. This would mean an enormous outlay of money

every year. To reduce this amount, most of the nations adopt a device. They try to combine this function of the Government with another function. Now let us see what that other function is. Do you know that modern law recognizes property in books—not merely in the physical entity called 'books' but also in the thought-content of books as distinct from the physical entity. Property of this kind is said to be immaterial or incorporeal. Immaterial property in the thought embodied in books came to gain recognition in law about three centuries ago. Once proprietory right is mentioned, you will grant that disputes are bound to arise about it. A court of law will have to adjudicate on lawful ownership. In the case of immovables or landed property, as it is called, what is the chief aid that is available to establish right-ful ownership ?

The class: Documents.

Yes. Registered documents, i. e. documents registered with a department of Government established for the purpose. Similarly in the case of disputed proprietory right about the contents of a book, you may expect that the registration of copyright with an appropriate department of the Government will be sufficient. However I shall show you that such a registration of copyright, though necessary, is not sufficient. In the case of landed property registration is both necessary and sufficient. But in the case of copyright property, the fact that my book *Library administration* has been registered will not give all the help which a court of law will need. The defendent may plead that his own book on *Library administration* came out earlier than mine, and it was I that had violated copyright by copying his book! He may, thus, turn the table against me.

The class: The date of publication will solve the problem.

No, it won't. The defendent may plead that he had an earlier edition in the market, and he might have even registered it. Let us grant that he had an earlier edition. My pleading is

that his first edition did not contain the matter under dispute and that the second edition which came out later than my book contains the matter and that it was stolen from my book. The judge may call for copies of all the books concerned. But another issue is sure to arise. The authenticity of the copy produced will be questioned by either party. This is a complication peculiar to immaterial property. It cannot arise in the case of landed property. To avoid unnecessary addition to the work of the judge in matters like this, society has conceived the idea that when a book is registered for copyright, an authentic copy of it should be deposited with the Registrar of Books so that he might produce it in the court of law whenever demanded. Thus for this legal purpose virtually every book published in a country has a copy of it deposited with the Copyright Registry. This fact is utilised by the Government to secure a copy of each book produced within the nation. There is, however, one obligation which the Government owes to the proprietors; it must keep the copies deposited in the Copyright Library with care and produce them on demand. This obligation made the Governments, in the first instance, very chary; the copyright library was kept apart as a perpetually locked affair.

But, after some decades of experience, most of the Governments have merged the Copyright Library with the National Central Library, with the provision that copyright books should be kept distinct from the books acquired through other channels. This has meant saving of money in the building up of the National Central Library and several other developments in the improvement of Library Science and Library Service both at the national and the international level as you will learn when you study Library Organisation. I may say, at this stage, that India, which has yet to set up its National Central Library, should skip over the early stages of the evolution of National Central Library,

learn from the experience of other nations and, if possible, take a step in advance of them. I have been advocating, for example, that the National Central Library, the National Lending Library and the Copyright Library should all be merged into a single National Central Library and that this should take up several new functions. Details of this proposal of mine, you will examine fully when you do Library Organisation.

321 City Library

We have been so far considering types of libraries potentially intended to serve the 'entire nation'. One way of arriving at other types will be to examine various ways of forming 'sections of the nation' which will demand either a distinctive form or mode of book-service or a special sort of book-collection. What are the principles by which we can arrive at smaller groups than the nation that would be better served by a distinctive type of libraries? One such principle has been 'Residence'—residence in a contiguous area smaller than the country as a whole. For various purposes, parts of different sizes of a country figure as units: Province, Districts, Cities, Towns, Villages and Hamlets. Let us see which of these call for library-types of their own. Provinces do. They will give rise to Provincial Central Libraries, similar to the National Central Library. This will happen in India and in countries like the United States which are too vast to have a unitary government and, therefore, consist of a federation of semi-sovereign states. In countries like England, which are too small to demand layers of sovereign government, the type known as Provincial Central Library will not arise. Historically, it is the Cities which are the first units that established a distinctive type of libraries of their own. This type we may call 'City Libraries'. Such a library is intended to serve local needs; it is intended to serve all the people of the city; as a matter of national economy, it would buy only such books as are

in frequent current use, leaving the supply of books of infrequent use to the National or the Provincial Central Library. A library of that type is best owned and financed collectively by the people of the city—which means, by the Municipality or the Corporation of the city. Its building will depend on the size of the city. It may have a big central building and a number of smaller buildings to house branch libraries in the different divisions of the city.

322 Rural Library

The people in a district—say the revenue district, which is the normal unit for an efficient management of problems of an essentially local nature—are distributed between the cities and the other areas of the district. It is usual to refer to the other areas as 'rural area'. The real differentiation is based on the density of population; but, in practice, localities are classified on the basis of their local population; and the criterion is usually arbitrary. For library purposes, a locality with a population of 50,000 or more will be called a city and all the other areas of a district form its rural area. In the rural area, we may distinguish three kinds of localities: town—a locality with a population between 5000 and 50,000; village—with population between 1,000 and 5,000; and hamlet—with population less than 1,000. Neither a town, nor a village, nor a hamlet can afford to have an efficient library of its own. Its limited financial resources or taxable capacity will make it impossible. It is, therefore, usual to have a library for the district as a whole and feed the rural people from its resources. In England 80 percent of the people live in cities. The rural library was, therefore, late in developing. In India 90 per cent of the people live in rural areas. The library service of the Indian people will, therefore, depend largely on rural libraries. It is this type of libraries that will require the greatest amount of attention. As its clien-

tele is sparsely distributed over a wide area—unlike the clientele of a city library who are concentrated within a small compass—the mode of service should differ between city and rural libraries. The most appropriate authority to establish and maintain a rural library is the District or Taluk Board of the area. Its Central Building will not need big reading rooms, as its readers cannot walk to the library as in the case of readers of a city library. It must, on the other hand, have garage accommodation for the fleet of motor-vans it should maintain to take books out to the towns, villages and hamlets at agreed intervals; it should also have branches in towns and delivery stations in villages and groups of hamlets. I mention this to show that we are justified in counting the city libraries and the rural libraries as two different types. Both the types share, however, one characteristic. They meet local needs; they are essentially local in their make-up. We may therefore, use a common label to denote them collectively. What label will you suggest ?

The Class : Local Library.

Yes. I agree. I must tell you, however, that the English language has evolved in its usage another label to denote them; it is 'Public Library'. The semasiology of this apparently non-rational term will be explained to you when you do Library Organisation. For the present, it is enough to say that you must interpret the term 'public library' to mean 'local library' and that when we coin terms in our own language, we should not blindly and verbally translate 'public library', but must use the equivalent of the other term 'local library'.

We have practically exhausted every possible way of getting a section of the people of the nation based on residence, for discovering new types of libraries. We should therefore follow the Maxim of the Eyeball of the Crow and turn our thought on

some other principle to get sections of people with whom new types of libraries may be associated.

33 Academic Library

We may, for example, think of libraries attached to institutions. One class of institutions in which libraries have been for long receiving recognition are those engaged in formal education—Schools, Colleges and Universities; perhaps we may add to these, research institutions like the Indian Institute of Science at Banglore or the Tata Institute for Fundamental Research at Bombay. The sections of the people of the nation served by a library of this type consists of those who form the teachers or the taught of the institution concerned. It will be easily granted that the ownership and the financial responsibility should also vest in the institution concerned. The books in a library of this type will be restricted by the curricular requirement of the institution. Moreover, old books will have often to be replaced by newer books. It may be possible to fix a ceiling for the number of volumes in the library. The growth of such a library, after the ceiling is touched, will consist more of renewal than of increase. The building of this type of libraries need not grow indefinitely as of the National Central Library and perhaps not even to the extent to which a Local Library should. We shall use the label 'Academic Library' to denote the type of library considered just now.

Educational institutions can yield only the four types we have mentioned. Let us turn our eyes on other classes of institutions.

34 Business Library

341 Industrial Library

Large scale industrial production and the associated mechanisation of production, coupled with the pressure of population

which demands continuous improvement in the method of production and the discovery or invention of substitute substances and commodities, demanded an intensive intellectual pursuit of industries as a means. The results of such a pursuit have to be disseminated effectively among the operatives. These factors have, of late years, led the industrial business-houses to maintain libraries to help the work of the front-rank research staff as well as of the ordinary operatives. We may call this type of libraries an Industrial Library. Naturally the ownership and the financial responsibility for it must vest on the business house concerned. Its collection will be very specialised; it will be determined strictly by the needs of the industry; it will have to be constantly brought up-to-the-minute and out-moded materials will have to be ruthlessly weeded out. A library of this type will have to pay more attention to the needs of the individual workers of the industry more than in any other type we have discussed so far. It will have to produce printed materials not merely on demand but more often in anticipation. Its methods of service will have, therefore, to be very specialised and quick. Its building need not grow beyond a limit.

342 Newspaper Office Library

A special class of industry — I deliberately use the word— is the Newspaper Industry. It produces miscellaneous material in print. No doubt its correspondents collect data by direct observation of happenings in human society and in nature. But to collate, prepare and feature the data in a helpful way, it has to draw considerably from already published material. I had almost daily occasion to feel the pressure of this need on the part of the Newspaper Offices at Madras. As they did not have a properly organised library in those days, with a trained staff to make their book collection yield readily the information required, the telephone of my library was frequently

kept busy by them. A cable about some occurrence in a foreign country would result in my staff collecting reliable information about the physical features, the buildings or the personalities concerned. Very often I had collected the information from the old files of their own newspapers, which were mute in their own office as they had not organised their libraries and put them in charge of properly trained personnel. In my period of the administration of the library of the University at Madras, the practice of providing illustrations in the dailies came into vogue. In the earlier years, it was an exciting experience for us to locate pictures in the books in our stock, from which they could reproduce. Experiences of this kind—the dependence on an outside library—soon led the newspaper industry to realise the need to have its own library. The clientele of a library of this type is just the staff of the Newspaper Office. It has to be owned and financed by the same. The distinctive feature of its stock and of its services is that these are turned on extensive Ready Reference Service. This means that a distinctive feature of the library staff of a Newspaper Library is the maintenance of an index of all kinds of information and pictures that appear in print, as an improvised local supplement to the published ready reference books like directories and who's who's. Its building need not grow beyond a limit.

345 Commercial Library

Another kind of business which is becoming very complicated in our days is commerce. The forces which determine the level, volume and direction of commerce have long ago ceased to be simple or local. Commerce is now definitely an international phenomenon with all the handicaps, uncertainties and surprises resulting from the persistence of political barriers on a national basis. The flow of commerce is super-

sensitive to localised happenings in remote parts of the globe—happenings in any level—meteorology; flood; fire; religion; philosophical or ideological change; political or economic policy; political relation within a nation or between nations; discoveries in any of the sciences and so on. If commercial business is to stand the strain, its promotion must be based on broad-based and up-to-the-minute information about all such happenings. The consular year-books and the vertical files in the library attached to a commercial concern have begun to play an overwhelmingly large part. Commercial libraries have to devise techniques which mechanise extreme vigilance and lightining speed not only in building up the year-books and files but also in culling the relevent information from them and assembling them in a helpful way. This kind of service cannot be expected from any ordinary local library. The All India Chamber of Commerce, for example, can increase its efficiency ten-fold if it pays attention to its library and have for its librarian a person of the status and learning which will compel its own respect to him and provide him with the staff and other facilities which he lays down as essential to enable him to do his best to the commerce of India. The commercial concerns in each commodity or group of related commodities should also maintain such a specialised library. The commerical concerns of several of the countries of the world have already begun to treat their libraries in this way and such countries easily score over those which have not done so.

348 Departmental Libraries

The most vital, the most complicated and the most infulential business of to-day in any country is its own Government. During the last century, the State has extended its sphere of functions almost without limit. Without any prejudice to the perennial demand for the intuitive quality called

statesmanship, we may say that the government of a country has now become too complicated to be regulated either by common sense alone, or by the rule of precedent or by mere flair. It has to be based on accurate information. The race between population and natural resources is exerting an all-round pressure on governmental policy and its administrative implementation. This pressure can be met only by information of the right sort, prepared from observed facts by approved statistical methods. Publications which give raw materials, books and periodicals showing the latest methods of properly dressing them and the finalised information so obtained by all the governments of the world bearing on all the activities of the people have become indispensable to those who make up the government — from the premier to the junior-most administrative personnel. The situation can not be met except by division of labour. The ministers and the administrative staff cannot hope to cope with their work except by the creation of a library division in each department. It is true that some of the Departments of the Government of India, for example, have libraries of their own. But they are hardly anything more than ritual appendages; their organisation, their furniture, and above all their staff—their number, qualification, status, pay and the respect they are shown—prove this beyond doubt. The Government of India and the governments of the units have gone on merrily with such despicable treatment of their departmental libraries because all the important and creative job was till now done beyond the seas. Whatever else independence fails us, it will not fail to cut off all such help from overseas. Secretariate work can not any longer be preparing notes and digests on the policy and practices taking shape in a distant land. It is the business of the secretariate to take up the more vital duty of evolving policies and practices calculated to improve the vital, mental and spiritual needs of our teaming millions without

conflict with world-trends and with neither undue dependence on or undue aloofness from other nations. This duty it can not discharge unless the officers of each Department agree to share the work on a basis of equality of status with a new class of officers who are experts in assembling, organising and featuring all published materials in such a way as to focus them accurately and expeditiously on any problem which engages the attention of the Department at the moment. These new officers working in the Departmental Libraries should be adepts in producing any desired pattern of information with as much ease as a kaleidoscope. The anti-deluvian policy of looking on the men at the library as part of the 'ministerial staff', regarding them as too low to be allowed to sit in the presence of the Secretary or any of his understudies and putting them down as too subhuman to exercise any judgment in the understanding of a Departmental problem in all its setting, should not be allowed to persist any longer in independent India. Any continuance of the old method of running the government, without the expert help of the Departmental Library staff, will soon land us in a crash. I trust that India will throw forth enough statesmen now, who can foresee the impending crash and take steps to avert it by setting up a library of the right sort in each Department and treat those in their libraries as co-ordinate and not subordinate to them. As I had already remarked in the first lecture, when our country throws forth such far-seeing statesmen, then only will there be a true appreciation of the forward step taken by this University in establishing a post-graduate degree course in Library Science to train the leaders of the library profession, a post-graduate doctorate course in Library Science to put forth the creative souls needed by it and a diploma course in Library Science to train the rank and file in the most up-to-date methods of work. You have the privilege of being the pioneer in this new venture of India, to supply the needs of our governments in anticipation.

35 Special Library

We have so far obtained sections of the people of the nation on the basis of residence and of the institutions to which they are attached. These sections helped us to isolate two types of local libraries, four types of academic libraries and four types of business libraries. We shall next seek to isolate some other types of libraries which serve special classes of people—those that have one sort or other of handicaps.

351 Children's Library

The first class I should like to mention consists of those whose mind is still immature—not due to any disease—but because of the natural cause of age. The children of the nation —persons who are below 18 years or perhaps we may put it as 16 years—form a special class from the point of view of libraries. Their mental immaturity makes adults' books unsuited to them. In the first place, the language of such books is too advanced to be easily intelligible to children. Secondly, their thought-content is too specialised or incomprehensible. Thirdly, primary senses are the more dominant means of mental enrichment than the derived, slow-to-nature intellect in children; a consequence is that children's books must have more illustrations, than adult's books; they should be more attractively printed and bound—the very opposite of what obtains now. The mode of service also will have to be adapted to the mental level of the children. Again, their physical immaturity will affect the fittings and furniture. In a children's library, they will all have to be of smaller height than in an adults' library. This factor will not be without effect on the dimensions of the building itself. As all the children of a locality must have the benefit of library, it is best that children's library is owned and financed by the Local Body. The practice in the West is for each Local

Library.....Public Library, as they call it—to have a Children's Department.

The class : Is it different from School Library ?

That is a moot point. Historically, as the compulsory school-age was far below 16 years for long, many children could not get the benfit of a school library. The Public Libraries of the West were, therefore, obliged to open Children's Departments. The position in India is quite different. We have no local libraries in most of the localities. Nor do we have a compulsory school age as yet. We have to begin from a scratch in both matters. My own opinion is that we may develop both in integral relation to each other. As we are possessed of these problems so late in the day and as we have the experiences of other nations to guide us, my own recommendation is that it should be possible to formulate and develop our educational and library policies in a more economical way and avoid the duplication of work which is inevitable in having parallel systems of school and children's libraries. You will discuss this more fully when you do Library Organisation in detail.

353 Prison Library

Another special class of people who are in need of a special type of library are those who are shut in prisons. Obviously prisoners cannot have access to local libraries. Moreover the treatment, which the prison authorities prescribe for them, may exclude several of the books from being served to them—blood-curdling novels involving murder, theft and detective work may prove harmful. The educational and vocational methods which the prison authorities follow may point to a particular class of books as more suitable. The prisoners are generally subnormal or at least abnormal in their mental make-up. Reference service to them will demand special training in abnormal psychology. The Library for prisoners is best located within the prison ; it is

best that the prison authorities themselves own and finance them. But this has not yet happened in all its fulness till now anywhere in the world. The very idea of prison library service is only very recent. It is now mostly a matter of private philanthropy. We were running such a prison library at Madras before the war. But, there is every sign of the prison library being lifted from dependence on philanthropy and established as part of prison organisation. Independent India may well march with other countries from the very start of this movement. Prison-ownership really means Government ownership. When our Government makes up its mind to establish prison libraries, this Degree Course will be ready to include 'Prison Libraries' in the list of the special subjects prescribed for the second year of the course, so that the Government may easily get specialists to man their prison libraries.

354 Hospital Library

Another special class of people who are in need of a special type of library are those who are temporarily made abnormal by their being shut in hospitals as in-patients. There are various sub-classes among them. There are the patients in the surgical ward who are mentally quite normal and alert. The tedium of prolonged stay in bed may well be removed by feeding them with books—not merely recreative, light literature—but also books on their own special fields and books of the standard which can engage and enrich their mind. There are at the other extreme fever-patients who may be harmed by books. There are also some mental diseases whose treatment may be helped by the prescription of suitable books for study ; there is, in other words, scope for bibliotherapy. Here again the library staff should have special training in patients-psychology ; service will have to be special ; books will have to be trolleyed from bed to bed ; and so on. The proper authority to own and finance

a hospital library is the hospital itself—which would virtually mean Government. As in prison-libraries, hospital-libraries also are still at the stage of private philanthropy in practically all countries. The hospital library service at Madras from 1930 to 1939 was well appreciated by the patients. But, it will not be long before public opinion demands its becoming more certain by being taken to the stage of government finance and ownership.

355 Sea-Farer's Library

Another special class of people who are in need of a special type of library are the sea-faring folk of a nation. They can not have access to any public library ; they will be in the high seas most of their time ; but they too are as much in need of books for recreation, information and inspiration, as any of us who stay at home. The type of library which can serve them probably will have all sorts of special problems—in the choice of books, in ownership and in finance. This type has not yet evolved anywhere. But it is sure to establish itself in due course.

356 Library for the Blind

Is there any other class of abnormal people who stand in need of a special type of library ?

The Class : Deaf and dumb.

I agree that the deaf and dumb do form a special class of abnormal people. Their education has to be on special lines ; in fact the school for the deaf and dumb is a special school. But once they are educated, once they become literate, is it not true that they can draw their books from any local library. I agree that some of them may have been trained in special handicrafts and that they would need books on such handicrafts. But a local library is expected to supply reading materials on

all arts and crafts prevalent in the locality. On these grounds, I hold that the deaf and dumb do not call for a special type of library. Any other special class of people, with any other abnormality, or physical handicap ?

The Class : The blind.

Yes. But do you think that 'Library for the Blind' has any meaning. The one primary sense which reading uses is sight. How can one deprived of sight read ? How can there be a library for the blind ?

The Class : They have a kind of book which is read with the tip of fingers.

You are right. Human ingenuity has invented what are known as Braille-Books. In them, the page is filled with embossed or raised dots, arranged according to a standard code. By feeling these raised dots with the tips of fingers, blind people do read. I know of blind boys who have passed the degree examination of a University by reading such books. The library for the blind has the special work of producing the braille books. It has to send them to the homes of the blind readers, who will be scattered throughout the land—probably not more than one blind person in any locality. This sparse distribution of the blind shows that book-service to the blind can not profitably be left to the care of Local Libraries. It has also left the philanthropy phase. The conclusion is that there is no need to have more than one library in a nation and that the National Library for the Blind is best owned and financed by the Government. I hold that it would be more economical to make it a wing of the National Central Library, than to set up an independent organisation. I think I have said enough to conclude that the Library for the Blind is a special type of library for consideration.

39 Libraries of Special Materials

There is another way of forming special classes of readers and that is through the specialised form of reading materials used by them. Libraries catering to the needs of such classes of readers go by the materials which they are designed to serve.

391 Archival Library

We have, as an example, the Archival Library or the library which collects, organises and serves the records of a nation.

LECTURE 4

Adjuncts to Field of Library Science

Meta-Library-Science

41 Library Organisation

The bewildering list of types of libraries which we were led to recognise in the last lecture calls for a proper understanding of their relation to one another. From this point of view we may say that the several types fall into certain filiatory groups. We have already given a generic label to denote such groups. For example there is the group called the academic libraries. Take the type 'college libraries'. I am sure, you will grant that it would be uneconomical for each college library to go on its own way without any relation to the library of the University to which its college belongs. On the other hand, much can be gained by the libraries of all the colleges of a University, getting tied up, so to speak, at the University library. There must be an agreed specialisation in function. There should also be uniformity, in library practices like classification, cataloguing and shelf-arrangement. Taking India as a whole it will be equally desirable for a similar co-ordination among all the University Libraries of the land. Inter-library loan, agreed specialisation in certain fields of knowledge and uniformity in library practices of all sorts will not only make the library fund of the Universities taken as a whole go a much longer way, but will also contribute to a source of comfort to readers who are obliged to migrate from the area of one University to that of another. We have to remember here that probably each college is autonomous and certainly each University is. To bring about helpful co-ordination among such bodies would require organisational technique of a delicate kind.

Similar remarks apply also to business libraries in a more pronounced form. Let me illustrate with one type of libraries—say Industrial Libraries—and even there one species, Textile Libraries. Each of the big textile concerns in India will have its own library. Thus there will be Textile Libraries scattered in different parts of the land like Madura, Coimbatore, Bombay, Ahmedabad and Cawnpore. But it would be uneconomical—even impossible, for each such individual library to be self-contained. Not only should they co-operate with one another as we said that University libraries should; but in this case a higher level of economy and efficiency could be reached if the textile trade could by agreement maintain an All India Textile Central Library. Perhaps this library is best developed by the Indian Central Cotton Committee at Bombay. One of the special functions of this library would be the continuous preparation of an exhaustive bibliography and making it reach all the textile firms in India through a periodical bulletin. Similar chains of libraries will have to be formed for every other industry. Library work at such high level has not till now been envisaged in our country. That was because of the lethargy which went with our political subjection. But this state of affairs can no longer be continued in free India. It is regrettable that this is realised neither by the industries themselves nor by the planning authorities at the national or government level. We have only to look around for a while to realise how much headway has been already made by Western countries like England and America. The organisational problems of a very complicated nature, which are involved in the co-ordination of business libraries, is being tackled by bcdies of the library profession called Special Libraries Association. The periodicals and the proceedings of such Special Library Associations are a proof of the enormous output of thought which the organisation of business libraries demand.

I have said enough to show that the general theory of organisation and its application to the library world should form an important branch of library science. Library organisation will have to be pursued at different levels and the problems, which it will meet at the different levels, will be different. At the national level the organisation of the National Central Library would involve problems which are all its own—its book and service relation to the different groups of libraries in the land and to similar National Central Libraries of other lands and the World Library Centre which the UNESCO is engaged in establishing, its bibliographical activities at the national and international levels, the part it should play in the maintenance and the continuous improvement of library technique, its responsibility in the administration of the Copyright Act, the part it should play, in association with the Universities, in the creation of library personnel and its financial organisation, are some of the important problems that come to one's mind. At the provincial level, organisation reaches its peak. In the constitution of India—in fact in all federal constitutions—public library provision falls to the share of the governments of the federating units. The present world-trend is to put the public library system on a statutory basis enabling the government of the unit to delegate many of its library responsibilities to the several local bodies, reserving to itself the right to direct, inspect and improve the Local Libraries and the duty of providing financial aid. All this means full-fledged organisational work. At the local level the study of library organisation will be turned on the relation between the omnibus local-body, its library committee and its librarian. It should also involve the setting up and maintenance of the branch libraries and travelling libraries which efficient service would demand. The establishment of branch libraries and the delivery stations of travelling libraries imply the setting up of branch library committees or

village library committees. This will also form part of library organisation.

6. The organisation of work within a library, the day-to-day routine and the relation of the staff to the librarian are usually taken to fall in the sphere of administration and not of organisation. The distinctive administrative functions of a library, from book-selection to staff work, were enumerated in the second lecture. To this list we must add general office functions like staff-work, finance, accounts, records and stores.

Apart from these details it is the legitimate function of library organisation to relate library provision or library movement if you may so call it to the social make-up of the nation. In other words it must relate Library Science to other subjects like education, political science, economics, sociology and law, which determine the social make-up. Thus you will grant that Library Organisation is a vital branch of Library Science which should be added to the twelve problems which we enumerated in the second lecture.

42 Physical Bibliography

We have not yet exhausted all the problems which fall within the purview of Library Science. We have to remember that the physical commodity, which libraries seek to supply, is the book. We have already seen that book purchase, and prior to that, book selection are necessary functions of a library. Selection and purchase of books can be efficient only if they are based on a knowledge of the possible range of their qualities. You can not select and buy *Sarees* (female apparel) unless you can test their texture, estimate their aesthetic value, and know their variety which the market has. To select and buy profitably the vegetables for your daily use, it is desirable, if not necessary, that you should have some knowledge of their taste,

nutritive value, and range of availability. Selection and purchase of furniture would demand some familiarity with the wood of which they are made, the process by which they are made and the varied forms in which they are available. This does not mean, however, that you should have a knowledge of furniture-making, or of vegetable-growing or textile work to that degree of thoroughness which the cabinet maker or the weaver or the food-analyst should have. So it is with the selection and purchase of books for libraries. To do this efficiently, you must familiarise yourself with the book-world, though not as much as those who are engaged in the book trade.

At this stage, I must remind you once again about an essential difference between books on the one hand and sarees, vegetables and furniture on the other. The latter are all material commodities—pure and simple. But books are double commodities—both material and immaterial. In fact, as I told you in the second lecture, a book has a body as well as a soul; it is embodied thought. In selecting a book therefore, we have to assess it both on the physical side and on the thought side. We shall first confine ourselves to the physical side. This study is called Physical Bibliography. Viewed as a physical commodity, what is a book made of? What are its constituents? What are the elements in it about which we must acquire familarity?

421 Paper

The Class : Paper.

Yes. Certainly study of paper is part of Physical Bibliography. The problems about paper of which we must get a knowledge are:—

(1) the materials which may form the base and their relative strength and durability;

(2) the process by which the basic material is converted into paper, with special attention to its effect on strength, durability and texture, in short, on the quality of paper;

(3) the auxiliary materials which are introduced in the process, with special attention to their function and their effect on the basic material;

(4) the sizes in which sheets of paper are usually manufactured and the standard methods of folding them in making into books; and

(5) the history of the quality of paper, its water-marks and its sizes, if we are interested in buying originals of old editions of old books for their antiquarian value.

All these you must learn about paper; but let me remind you, not so as to enable you to become paper-makers, but to fit you to select books intelligently on the basis of their physique or physical make-up. Let us follow their embryology.

The Class: Binding.

Can it be? What are you going to bind? What have you to bind? Are you going to gather sheets of blank paper and bind them in the form of a book? You will then get a dummy book only and not a real book.

422 Printing

The Class: Printing.

Exactly. The next topic you must do in physical bibliography is, of course, 'Printing'. Printing is not a simple affair. It is very complex. Let us analyse it into several stages, in their due order. What is printing? I find that you are not accustomed to look at a problem in its face and make it disclose itself in all its bareness. As librarians, you will have to practise this

close-range, ruthless analysis of every problem which crops up in your daily work. It is necessary in all walks of life. But, it has become an unfortunate feature of our educational methods during the last hundred years that our students are not trained to stand up to a problem and examine it from all angles and analyse it to its ultimates so as to get a mastery over it. On the other hand, our method has been encouraging — nay, even has been consisting solely of — rote-memory, i.e., mere verbal approach to a problem and cramming the words which the teacher utters about it without asking why and without exploring it yourself. Your inablity to describe in a few words what printing is, in spite of your using print from your infancy, is a proof of my charge on the educational system which has helped you to grow mentally. You all know vaguely what it is; but you can not express it in words; unless you can see the problem with sufficient clarity to enable you to describe it in exact terms, you can not discover what all you should learn about printing. Look into the dictionary. It gives several meanings of the term 'Printing.' By trial and error, select the definition which describes what you have in mind. Here it is : To print is to produce (book, picture, etc.) by applying inked types, blocks or plates to paper, vellum, etc. There are five elements in this definition :—

(1) Paper, vellum, etc. — we have already included this in Physical Bibliography;
(2) types, blocks, plates;
(3) Composition;
(4) Ink;
(5) Inking item (3) above; and
(6) Contacting (1) and (3) after stage (5).

This shows that we must include in Physical Bibliography :—

(1) Types, including type-casting; type-faces, their style and size; composition of types so as to yield the reading matter;

(2) Blocks including their varieties, making and relative use;

(3) Plates as alternative to composed type-faces;

(4) Printers' ink including the mode of applying it; and

(5) Printing on paper.

All this you will have to learn, let me repeat, not so as to become competent printers, but only so as

(1) to judge the relative merits of different printed materials from the angle of fostering reading habit in people;

(2) to know the extent to which the exigencies of the printing process can affect the strength and durability of books; and

(3) the history of type-faces and printers' practices, if we are interested in buying originals of old editions for their antiquarian value.

423 Binding

Now it is the turn to consider binding, which was prematurely mentioned by some one some time ago. Let me describe to you what happens in the embryology of the book, after the sheets are printed. Each sheet is folded so as to bring it to the size of books; all such folded sheets are assembled in the proper order so as to form the book; they are stitched together; the resulting book is provided with thick card-boards at both-ends, these boards are then covered by some strong and attractive material like leather, cloth or paper; and lastly the name of the author and title are tooled on the covering material — usually

at the spine and on the front cover. Now-a-days, the book so resulting is provided with a paper jacket. Thus, in learning binding you will have to learn about :—

(1) the thread and the tape used in stitching and the mode of stitching, with an eye to the extent to which it will add strength to the book or injure it, and the mode of attaching pictures, plates and mass in the assemblage;

(2) the quality of the boards and the manner in which they are applied to the book, here again with an eye to the extent to which it will add strength to the book or weaken and injure it;

(3) the kinds of covering materials available, their relative quality, their suitability to the extent of wear and tear which the book may have to stand, the factors of their tanning and manufacture from the point of view of their eventual effect on the paper of which the book is made, and the way in which the covering material is applied to the boards;

(4) the glue which is used in the process from the point of view of its strength after it dries and of its possible attraction to insects; and

(5) the tooling.

All this froms part of Physical Bibliography.

424 The Finished Book

So much about the embryology of a book. Physical bibliography includes also the study of the finished book in regard to the way in which the printed matter runs in the book from the first page to the last, the distinctive zones which are recognisable like the preliminary pages, the text, the index and so on.

425 Book Description

In the case of books of antiquarian or bibliophilic value, as it is termed, physical bibliography has developed a technique and terminology to describe them. This is very specialised work; this will be much in demand in dealing with books printed in the earlier years and particularly in the first five decades after the invention of printing from movable metallic types. These are called *incunabula* literally meaning cradle books, i.e. books produced in the cradle stage of the invention of printing. India has not got much to do with *incunabula*. This course does not, therefore, intend to load you with this branch of bibliography, known as Historical Bibliography or Descriptive Bibliography. Another party for whom this is an indispensable tool is the class of scholars engaged in authoritative resconstructions of the original text of a classic which has begun to appear in many variant forms. Somebody has applied the term - "Calculus of Variants" to describe this methdology. Some mathematicians were misled to go in for books on this subject ! This is an aside. You will agree with me that the Calculus of Variants is a field of study more for editors and scholars than for librarians. In the earlier years, when Library Science had not developed, when active and brainy librarians did not find enough occupation in libraries or enough opportunity for research in Library Science, they used to let off steam, as it were, by wandering into this field and ploughing it. This tendency and some splashy results, which they got began to overshadow and overpower Library Science as aggressive weeds and delayed its own emergence into its full stature. I should plead with the Indian library profession, which is coming into existence only after Library Science itself has reached maturity and wants all possible hands to tend it further, that it should not allow itself to be side-tracked into Descriptive Bibliography, by sheer force of the imitation of the West.

43 Enumerative Bibliography

I have said enough to show you what we mean by Physical Bibliography which is included in your syllabus. It is concerned, as I said, with the physique or the body of the book. Subject Bibliography is concerned with the soul of the book. A more general subject is Enumerative Bibliography. It is concerned with the enumeration or listing of printed materials. The term denotes both the method or the technique of listing and the finished list. The work of book selection and book-purchase is more interested in the finished list rather than in the technique of listing. But the subject in Library Science, which we have denoted by the term 'Reference Service' is interested in the finished list as well as in the technique of listing.

The syllabus for the first year of the Degree Course, which is the same as saying the syllabus for the Diploma Course, includes only the finished list. A study of this will involve problems like:—

(1) The agencies who prepare lists of printed materials;
(2) The purpose for which they do so;
(3) The extent covered by such lists;
(4) The arrangement in such lists;
(5) The amount of information given about each item included in the lists;
(6) The provision to bring them up-to-date from time to time; and
(7) The reference value of such lists.

The syllabus may also go into the history of bibliographies and one fascinating branch of it is the history of the attempts to build up a universal bibliography. You will be expected to become familiar with the published bibliographies in several subjects.

The syllabus for the second year will include the technique of bibliography-building. This is a field where one has to learn by doing. Mere theory, however necessary, can not take you a long way. The mechanics and the routeing of the work will have to become a habit with you. To this end you will be asked to prepare a bibliography on a chosen subject in the course of the second year. After you have gained enough experience, you will be led to consider the organisation necessary at the national and international levels to prepare and maintain up-to-date international bibliographies so as to cover the entire field of knowledge.

44 Field of Knowledge

There is another subject which has to be included in Library Science. That is the Field of Knowledge. After all, the ultimate objective of Library Science is the establishment of contact between the reader and the knowledge he seeks. Books are merely transformation of specified sections of knowledge which is sought by him and produce the exact books that cover it. To do this successfully, one must have familiarity with the Field of Knowledge itself. This field is a continuum. The past knowledge which is embodied in the older books may, for practical purposes, be taken as a static continuum. You must know its sections and cross-sections, the terminology which is special to each such section and the methods which are in general use in it. But, in reality, the field of knowledge is a dynamic continuum. Old boundaries change and new boundaries take shape. This becomes irresistably evident when we deal with the knowledge which gets embodied contemporaneously. A purveyor of books should be very sensitive, not only to the violent eruptions and new formations in the Field of Knowledge, but also to the subtle changes which come over it. Inter-lacings of already known sections of knowledge happen from time to time.

In fact new formations take shape in the Field of Knowledge by Dissection, Denudation, Lamination, Loose assemblage

and Dressing of all sorts. Librarians must almost anticipate such happenings and when they do happen they should recognise them without any delay and relate them to the readers who have either actual or potential attraction to them. Incidentally, the equipment needed for this will also enable you to fix the place of the newly-formed specific subject in the scheme of classification. A knowledge of the Field of Knowledge is thus necessary to make you efficient in two branches of Library Science—Library Classification and Reference Service. As considerable maturity is needed to grapple with the Field of Knowledge you will be introduced to this subject only in the second year of the Degree Course.

I must say here that there is another discipline which is concerned with the Field of Knowledge. It is Philosophy. One of its branches —Epistemology—is concerned with the nature, source and method of knowing. Another of its branches—Logic—is concerned with Scientific Method and the sort of classification of Knowledge associated with it. The approach of Library Science to the Field of Knowledge will be somewhat different from these two approaches.

45 Meta—Library—Science

Today we have augmented the list of problems which arise in Library Science. On the second day, we had enumerated twelve of them. Our examination of the possible types of libraries brought forth Library Organisation as another problem and extended the scope of what we had called Library Administration in the second lecture. All these problems are intrinsic to Library Science. A careful consideration of the additional equipment necessary to become a successful and productive student and practitioner in the field of Library Science led us to realise that acquaintance with some neighbouring regions is neces-

sary. These do not belong strictly to Library Science and yet have intimate contact with it. 'Meta' is the epithet which is generally used to denote such annexes. That is why I denote the three subjects—Physical Bibliography, Enumerative Bibliography and Field of Knowledge—by the term Meta-Library-Science, on the analogy of Metapsychology, Metaphysics and Meta-Chemistry.

I have shown you that about a half of this Meta-Library-Science will be covered in the first year or the Diploma Course and that the other half will be reserved for the second year of the Degree Course. The whole of Library Administration and Book-selection will be covered in the first year. But the advanced portions of Library Classification, Library Catalogue and Library Organisation will be reserved for the second year, devoting the first year only to the acquisition of a working knowledge of them.

LECTURE 5

Highways & Byways in the Field of Library Science
Specific Subjects

In the last three lectures, we have explored two facts of Library Science : The problem facet and the type-of-library facet. We explored them independently of each other. We isolated 17 points of highlights or foci in the problem facet. In a similar way we isolated 18 foci in the type-of-library facet. Some of these foci admit of study independently of others. But some of the foci of the first can be studied only in relation to a specific focus of the second facet. In other words, such a focus of the first facet has to be sharpened by a focus of the second facet to be made realistic. In fact, such a reinforced focus-combination may be looked upon as a new and realistic focus. Thus, the number of specific subjects which Libray Science presents for study is not merely the sum of the numbers of the foci in the two facets. If it were so, Library Science will offer only 35 specific subjects.

On the other hand, if every one of the 17 foci of the problem facet can give rise to distinct new foci if impregnated by every one of the foci of the type-of-library facet, the number of specific subjects in the field of Library Science will be 17 x 18 or 306. In actual fact, the number is neither so few as 35 nor so many as 306. That is because every one of the 17 problems does not take a different shape when applied to a different type of library ; some do not. To ascertain the possible number of specific subjects, we must go into this question systematically. Let us take each of the 17 problems, see if it is likely to present a different shape when it is incident on different types

of libraries and thus count the number of specific subjects to which it can give rise.

51 Building and Equipment

In the matter of building and equipment, the specification of the standard units, say of book-rack, reader's chair, reader's table, periodicals table, counter-fittings, book-trolley, and the standard specification for certain features of the building like widths of gangways in the stack-room, the spacing of the windows and the treatment of floor surface will be the same whatever be the type of the library. But the parts of building, their arrangement, their size, the over-all size of the building and the provision for extension will vary from type to type. The National Central Library will call for the most complex building and so will the Provincial Central Libraries and they will also call for a design which will admit of an indefinite extent of expansion. The City Central Library will be less complex in its building and will admit of an upper limit in size, and its old outmoded books will be weeded out. The District Central Library will call for a building very different from that of the City Central Library as it will not serve readers within its premises and will not, therefore, require reading rooms. On the other hand it will need a large suite of garages and service stations to house and recondition its fleet of motor-vans serving as travelling libraries. The branch libraries of the City and the District Library systems will be small and virtually single-room affairs. All these classes of libraries will have independent buildings and will, therefore, admit of their own distinctive architectural features. But most of the academic, business and special libraries may not have independent buildings of their own. Their architectural features will have to fit in with those of the parent bodies. Even the number and disposition of the rooms will

ve to be different from that in independent library buildings. hus the problem 'buildings' will give rise to as many specific bjects as there are types of libraries.

541 Book Selection

From what we have said in the third lecture it can be asily seen that the different types of libraries differ essentially n their book-collection. There is, therefore, no doubt that the roblem 'book-selection' will give rise nearly to as many speci-ic subjects as there are types of libraries.

542 Book-Purchase to 555 Library Catalogue

It can be easily guessed that the six problems—book-purchase, periodicals work, accessioning, preparation of the book, library classification and library catalogue—are impersonal. They do not depend on the class of readers to be served. That is, they will be virtually the same whatever be the type of library in which they are practised. These six problems will, therefore, give rise to six specific subjects only.

56 Circulation Work

Circulation work, on the other hand, is personal. In the National Central Library, all circulation will be within the library premises. In the National Lending Library, circulation will be mostly to the other libraries in the country. In the Copyright Library, circulation will mean production of books in Courts of Law in response to warrants from courts. In the City Libraries, circulation will involve, perhaps, more of lending out to individual readers for home-reading than issuing for use within the library premises. In Rural Libraries, there will be hardly any issue within the premises. Circulation will mean putting two or three thousand volumes on wheels and exchanging them at hundreds of delivery stations at

stated intervals. Circulation in academic libraries will experience unequal stresses and strains, varying with class and with hours within a day and with term-days and holidays within the year. Circulation will also involve exchange with several small departmental collections or class-libraries to suit the exigencies of work in the departments and classes. Circulation in the business libraries will be a very arduous affair, though the number of persons to be served may be small. It will be still more different in special libraries, on account of the peculiar make-up of the patrons. In the hospital libraries, for example, circulation will have to reckon with a floating population. In the seafarer's library, the period of loan will have to be unusually long and circulation will have to reckon with individual vessels and not with individual sailors. Circulation in the National Library for the Blind will mean sending books to the homes of the individual blind by post and recovering them by post. Its clientele will be sparsely scattered throughout the country and the circulation records will have to be very special. In an Archival Library, circulation work involves unique public records and vigilance will be the overall and dominant factor. Accurate, dated information about the use made of each record is necessary. Manuscript Libraries will similarly present special problems in circulation. In general, we may state that circulation work will give rise to as many specific subjects as there are types of libraries.

57 Reference Service

Reference service is the most intensely personal work in a library. We should, therefore, expect this to vary from type to type of library. In the National and Provincial Central Libraries, it should not only concern exceptional readers who go to it in an exhaustive pursuit of the subjects of their interest; but it should also supplement, at specialised and obstruse levels

the reference service being done in primary libraries. It will have to be more often of the ready reference variety in City and Rural Libraries. In Academic Libraries, Reference Service will have to tune itself more to the task of training the students in tracing what they want than in finding it out for them. In Business Libraries, Reference Service will reach its crest. For, the library of a business concern or a Government Department has to share the work of the parent body. It is its duty to relieve those who are engaged in the specific work of the parent body of all the work of finding out all the pointed information relevant to the problems engaging their attention from time to time. Its reference staff should, therefore, be keeping track of the problems pursued by the parent body. They should assess intelligently all the ramifications of those problems. While one part of their mind should be doing this incessantly, the other part should be scanning all the printed resources of the library—the old ones as much as the new arrivals—so that nothing of value is missed. The success of the work of the parent body will depend on the thoroughness of the sweep of the reference service. As a probe with which the value of the new published materials appearing in the periodicals can be determined the reference staff of business libraries will have to prepare and circulate periodical bulletins containing annotated bibliographies and abstracts. In think I have said enough to show that Reference Service takes specialised forms in certain types of libraries. We may take it that Reference Service will give rise to about six specific subjects.

572 Publicity Work

Publicity work will have volume only in Local and Academic Libraries, But it will have to take different forms in City Libraries, Rural Libraries and Academic Libraries. It may, therefore, be taken to give rise to three specific subjects.

58 Shelf-work

Shelf-work is not likely to have different techniques for different types of libraries. It will, therefore, give rise to one specific subject only.

59 Adjunct-Problems

The problems enumerated as adjuncts to the field of Library Science—Organisation and Office Administration, Physical Bibliography, Enumerative Bibliography, and Field of Knowledge—are all impersonal. They can not vary from one type of library to another. They will together contribute only four specific subjects.

591 Summary

The following table summarises the above analysis leading to the isolation of specific subjects or lay-out of the highways and byways in the field of Library Science :—

	Problem	Number of Types of Libraries which differentiate it	Number of resulting Specific Subjects
1	Library building	12	12
41	Book selection	18	18
42	Book purchase	0	1
43	Periodical work	0	1
44	Accession work	0	1
45	Preparation of the book	0	1
51	Library classification	0	1
55	Library catalogue	0	1
6	Circulation work	18	18

	Problem	Number of Types of Libraries which differentiate it.	Number of resulting specific subjects.
7	Reference service	6	6
72	Publicity work	3	3
8	Shelf-work	1	1
91	Library Organisation & Administration	0	1
911	Office	0	1
92	Physical Bibliography	0	1
93	Enumerative Bibliography	0	1
94	Field of Knowledge	0	1
	Number of specific subjects:		69

Thus the number of specific subjects is 69. It is far less than the theoretical 306 and much more than 17, which is the number of problems.

LECTURE 6

Is There a Library Science ?

In the last lecture we reduced the number of specific subjects from the theoretically possible 306 to the probable 69. Even then the amount of information and the number of apparently isolated facts to be learnt will become distressingly large. Moreover the practices in the several libraries will tend to develop too much along individualistic lines—more than what may be necessary or add to the comfort of the readers who may be obliged to change over from the service of one library to that of any other. Indeed, even as a student of Library Science I found the bewildering variety in the practices of libraries in the West not to be the result of purposeful variation in all cases, but to be unintended ones due to drifting along without a normative force.

I wandered amidst a good number of libraries. It was an irrepressible sense of curiosity which made me do so. This curiosity itself was generated by two factors. The first was surprise at finding a room-full of books on Library Science in the library of the School of Librarianship of the University College, London; not more than a dozen books on the subject were known at the Madras University Library, which had just then appointed me as its librarian. Moreover, in the six months I spent in managing the latter library before going abroad, I had a variety of experiences which all turned on emphasising that there was nothing doing in a library. On the day I got relieved from my teaching post in the Presidency College at Madras, my Principal who was a well-wisher of mine and was glad that I was placed on a higher salary level, regretted that

there would no longer be any scope for my development, as work in a library was made up of dull, disjointed jobs of a low order. For two or three days after my taking charge of the library, hardly any work was passed on to me by the four old members on the staff, except signing a few letters. I felt miserable. It looked as if I was undergoing solitary imprisonment. I asked for work. They said that there was no work which the "officer" can do. There were only less than 20 readers visiting the library in a day; I wished to contact them. But I was told that it would not be in keeping with the dignity of the "officer" to make himself "cheap" with visitors. At the end of a week, I nearly wished to revert to my place in the Presidency College. But, I wanted to give a chance to myself. I offered to catalogue—there was no classification in the library—much against the protest of the staff. I found many irrational elements in the cataloguing practice of the library; but the staff said that they had all been hallowed by seventeen years of usage! It was all a matter of rule of thumb. When new problems turned up and transcended the established rule of thumb, chaos crept in. Locked doors separated readers from books. No help was given to readers in the choice of books; nor did they expect it. I began to fear that the regret of my Principal was well-founded and that I would have to waste my life if I continued in the library.

611 Divergent Practices

However I was advised to hang on until I completed my deputation to foreign countries. When I joined the Unversity College at London, I was given a key for the library room of the School of Librarianship against a deposit of five shillings. When I climbed up to the room and opened it—it was about 8 a. m.—there was none in the room. I was amazed and puzzled—I, a stranger, to be let into the library, all by myself

no "officer" or servant to watch me ! Books on open shelves; and how many volumes on librarianship alone—what contrast to what I had experienced at Madras ! Two practices cannot differ more from each other.

612 Disjointed Information

I began to spend long hours in that library and peruse the books systematically. They were all interesting; but the information contained in them were all disjointed. Their load, therefore, began to prove a burden on memory; assimilation became a strain and even impossible in certain matters. The class-lectures too often turned out to be equally disjointed except in one or two subjects. Facts, figures and practices were given in the form of notes with a forest of details. In cataloguing, for example, the lecturer, who expounded theory, mentioned various alternative ways in which the heading may be chosen or the title compressed or modified; but there was no attempt at showing their order of evolution or their relative worth; the practical work prescribed for cataloguing showed a still another way. The theory of classification was imparted with considerable coherence; but the practical classes in classification were not correlated to the principles taught in the theory classes; they were more like solving cross-word puzzles by random dips into a dictionary. The lectures on organisation were the most disjointed ones, crammed with facts and numerical data of a tremendous degree of accuracy.....like such and such a library has 236, 253 volumes and it has 321 feet of table space. So it was in physical bibliography, enumerative bibliography and archive administration. There was no visible thread stringing them all together.

613 First gleam

After subjecting myself for a couple of months to this avalanche of theoretical stuff, I worked for a month in the

Croydon Public Libraries. There, the functional organisation of the work, the functional distribution of the books in different apartments and the refreshing human touch which enlivened the triple contact of the readers, books and staff, threw out the first gleam on the possible existence of some central principles from which all the work in the library radiated. Could there be a Library Science with a few fundamental laws to which all the varying practices could be traced ? So, I thought.

614 Variety of Practices

On completion of my probation at Croydon, Mr. W. C. Berwick Sayers advised me to go and observe the practices of some other libraries. He got me invited to a library conference held in London. This gave me an opportunity to know the librarians of several libraries in Great Britain and they were kind enough to invite me to their respective libraries. I made full use of this hospitality and visited about 120 libraries of all types and sizes. I was struck by the variety of the practices to be seen. In one library, the organisation of the issue-counter was most advanced while its catalogue was primitive. In another, the collection was nearly exhaustive but the method of service was of the seventeenth century. In still another, the Library Committee had disallowed book-classification on the ground that it was a logical absurdity, but had allowed open access ! The building of one library, which was completed only just then, was designed after an early nineteenth century model while that of another built some years earlier was in a modern, functional style and yet the chairmen of the two Library Committees were equally proud of their designs ! In some libraries the book-rack touched the ceiling however high it was; in others, they were of the height of men and in some, of the height of children. Some libraries worked for a few hours; others worked all the waking hours in the day. One librarian swore by the Congress Classi-

fication; many had adopted Decimal Classification and so mutilated it in adapting it to the needs of new varieties of books that they were already in a quandary. The catalogue showed a bewildering range of variation. In physical form some libraries had the bound printed book form; some had the bound paste-down form; others had loose-leaf paste-down form; still others had more modern loose-leaf forms; and many had the card-form. In the form and arrangement of entries too, an equally bewildering range of variation was in existence. My wanderings from library to library and the frank and willing way in which almost all the librarians gave me unhindered facilities to observe and discuss — only one librarian, and he was India-returned (!), put on a superior air and, when I wanted facilities to observe the work of his library and answers to a questionnaire, remarked that it was a "tall order" and refused help—the unrestricted hospitality of the rest of the British librarians, their single-minded devotion to their work and their incessant industry gave me an experience which I still treasure with gratefulness and admiration. This experience was unique; the British librarians themselves did not have it; my observation book was swelling with details of varying practices and facts. It resembled the observation books of Tycho Brahe, the astronomer.....of course in a miniature scale, but no less bewildering in their scatter. Could these be boiled down to a few principles ? Could there be a Library Science with a few basic Laws with which any library practice can be proved to be true or false and from which new practices can be inferred to meet new situations ? So, I thought.

62 Anology of the Laws of Motion

Tycho Brahe's overpowering wealth of observational data were digested by Kepler and he reduced them to his well-known principles of the motion of planets in their orbits. This

reduction of Kepler gave considerable relief to the learners and the practitioners in the field of Astronomy. But even Kepler's principle was not sufficiently fundamental. There were other principles in physics and other allied fields of knowledge which were equally helpful in their own sphere but which equally failed by their not being really fundamental. Taken all together, they were far too many. They needed to be boiled down to a far smaller number. Newton did it; he enunciated his Laws of Motion—only three laws. But they contained in a potential state almost all the then known facts of the motion of heavenly bodies. More than that; they contained in a potential state even some facts then unknown. These made astronomers look for facts unknown till then and they did find them. The existence of two more planets—Uranus and Neptune—was such a fact; Herschel was one of the Astronomers who was led by the Newtonian Laws of Motion to look for them and he did find them. Now, what is Newton's First Law of Motion? A body at rest will continue to be at rest until it is moved by a force. How fundamental, how axiomatic, how trivial, one is inclined to say. Equally fundamental are the other two Laws of Newton. Imagine a law which says "A body will not move unless it is moved!" Yet this law and its two equally simple brother laws hold among themselves almost all the known facts about planetary motion and lead to the discovery of new planets! Their depth should then be unfathomable and their import inexhaustible though their simplicity make them appear almost trivial at first sight. Yes 'trivial' is the word. Until you boil down data to a few principles and these few principles again to a still fewer laws which are trivial, you have not formed a Science. The more trivial the fundamental laws, the greater will be their potency and the more easy will it be to understand a science and to apply it for practical ends.

63 Triviality of Laws

Does this glorification of triviality appear absurd to you? Then listen to this passage. I am reading it from the issue of the journal called *Mind* received two days ago. It occurs in pages 133 and 135 of volume 56, 1947. It is taken from the article on *New foundations of logic* by K. R. Popper. Here it is: "Logic ought to be simple; and, in a way, even trivial — the Most trivial and at the same time the simplest rule of inference is undoubtedly :—

$$a/a$$

in words: "From the statement a, the statement a can be derived." This rule is so trivial that many classical logicians have hesitated to admit it. They have felt that nothing could be gained by admitting it and that the dignity of the procedure of inference would be imperilled if this were called an inference. Since the rule is, obviously, not invalid we should have to admit it even if it were useless. But, contrary to first impressions, it is far from being useless... It is even characteristic, altogether, of the triviality of the fundamental rules from which the edifice of logic arises. We should, furthermore, keep in mind that triviality of the basic assumptions is an advantage rather than a dis-advantage, provided that what we obtain at the end is adequate for our purpose ... In spite of the triviality of these rules, the concept of derivability thus determined turns out to provide an exceedingly powerful instrument. It will be shown that with its help, we can draw up systems of rules of inference ... and lay down definitions of all the logical concepts."

631 An Anecdote on Triviality

We have a saying in Tamil—probably you have a similar one in Hindi too—which is descriptive of a fundamental law of

a science. It is this: In appearance, it resembles a meek cow; but when it leaps, it is like a ferocious tiger. The triviality of a fundamental law will mislead unwary people to pass it by as a powerless, imbecile statement, the admission of which does not add to the dignity of any science. It is when its implications are drawn out of it step by step, that its immeasurable potency will become recognisable. I remember an amusing incident, in which the triviality of fundamental laws restored pleasantness in my relation with an intimate friend. He was typically human in that both good and bad met in him; he was a powerful personality in that the good and the bad in him were of great intensity. A strong ego and a deep envy were feeding on each other in his personality. These two led him, fortunately for society, to seek limelight at any cost, to attempt to excel others, and to seek self-glorification. I say 'fortunately for society', because they led him occasionally to do many useful things and public acts. Often such public acts had matured and produced lasting results before he discovered that they had gone much further than was necessary for his own purpose and his ego and envy made him attempt smashing them. My book called *Five laws of library science* got a good reception and this stirred the envy of this intimate friend of mine. One day he found a copy of C. R. Sanderson's *Library law* on my table and this made him betray his jealousy by the involuntary facial features which accompanied the remark "How is your book new? Here is a book on library law. How can they call your book original ?" The English homonym 'law' had misled him. I said, "My laws are fundamental ones; his are legislative ones. My laws are trivial; his are enforceable by legal sanction". Calling my laws trivial did magic. His face began to gleam and I felt very relieved when he said, "Oh, ho, are your laws merely trivial ? I did not know that. If Sanderson's book is substantial, why not you buy more copies

of it for the library ?' This digression was meant to prepare you to ponder deeply on the fundamental laws of a science—and of Library Science, if there is such a science—and not to be insensitive to them because they turn out to be simple or trivial.

632 Reaching the Stage of Science

To reach the stage of science, facts must be observed and accumulated to great dimensions; they should be sorted out and tabulated; their relationship should be sensed. Then some single statement or brief formula from which the whole group of facts is seen to flow, is to be formulated. This is the work, not of a mere cataloguer, but of a man endowed with creative imagination. The single statement, the brief formula, the few words of which replace in our minds a wide range of relationship between myraids of isolated facts, is what we term a scientific law. Such a law, relieves our memory from the burden of individual facts and sequences of them; enables us to grasp a vast complexity of facts with the minimum of mental fatigue. Though the law is reached by what seems inspired imagination, it must be tested and criticised by the discoverer in every conceivable way, till he is certain that his imagination has not played him false, and that his law is in real agreement with the whole group of phenomena which it condenses. As Ramanujan, the mathematician, once said to a friend who flattered him to be a genius, "Come and see me at night when I waste midnight oil in testing the accuracy of my formulae". Faraday, the physicist, has said similarly, "The world little knows how many of the thought and theories which have been passed through the mind of a scientific investigator have been crushed in silence and secrecy by his own severe criticism". What sets the human imagination to conjure up the laws of a science and to slave at them until their validity and helpfulness are established

is the insatiable urge to resume in some short formula—some brief statement—the facts of human experience.

64 Note of Scepticism

Do the facts of human experience in the setting up and the progressively improved rendering of library service lend themselves to be reduced to a few scientific laws? My answer is "Yes". What these laws are you will hear in the next lecture. The isolation of these laws satisfied a necessary condition to give an affirmative answer to the question "Is there a Library Science". In his Foreword to the *Five laws of library science*, Sir P. S. Sivaswamy Aiyer utters a note of scepticism in the words: "Attempts have been made to systematise the knowledge on this subject and it is now claimed that it has attained the status of a Science. Whether the organisation and management of libraries is to be regarded as a Science or Art, it is needless to consider".

65 Material of Study Irrelevant

The material studied is likely to have been one of the factors on which this scepticism was based. For in a restricted sense, which has been brought into vogue by the nomenclature of the course of studies in universities and is still popular, the word science is taken to relate to the physical world and its phenomena. In course of time, it has been extended to relate also to the world of living bodies and its phenomena—now called natural sciences. If 'science' is used in any of these two senses, surely we can not hope to have a Library Science. But there is a growing support to another view of science. In this view, the material of a body of knowledge is irrelevant to an examination of its claim to be deemed a science. Indeed, more than half a century ago, Karl Pearson had voiced this view in the words: "The material of science is unlimited—every group of natural

phenomena, every phase of social life, every stage of past or present development is material (for science)...The material of science is co-extensive with the whole life." The dictionary definitions of 'science' which incorporated this generalised view of its material are:—

1. A system based or purporting to be based upon scientific principles: a method of arrangement, functioning, etc , reconciling practical or utilitarian ends with scientific laws: e. g., Domestic Science; Animal Husbandry.

2. Accumulated and accepted knowledge which has been systematised and formulated with reference to the general truths and made available in work, life or the search of truth. In this view there can be a Library Science. The material of its study can be no bar to its claim to be called a 'science'.

651 Old Practice at Oxford

An old practice of the University of Oxford is of interest in this connection. It used to apply the term science to portions of ancient and modern philosophy, logic and cognate subjects. In Morley's *Gladstone*, for example, we find "Examined by... Hempdone in science". Mark Pattison says that the portion of Aristotle prescribed was called science.

652 Testimony of Jevons

The epigram of Jevons, "Science arises from the discovery of Identity amidst Diversity" severely ignores the subject matter that comes within purview. This permits our saying that any subject is an equally valid subject of investigation for a possible science.

653 Testimony of Dictionary

The fourth meaning listed in the *New English dictionary* mentions the essential quality which a body of knowledge should

have to be called a science and it does not mention the material studied. It is: A branch of study which is concerned either with a connected body of demonstrated truths or with observed facts systematically classified and more or less collected by being brought under general laws and which includes trustworthy methods for the discovery of new truth within its own domain.

654 Longing of Omar Khayyam

The essential quality of a science is not to be found in what it treats about but in what it achieves in relation to what it treats about—what Omar Khayyam had longed to achieve:

> Ah Love! could you and I with Him conspire
> To grasp this sorry Scheme of Things entire,
> Would not we shatter it to bits—and then
> Re-mould it nearer to the Heart's desire !

66 Methods of Study Indecisive

The method employed in the pursuit of a subject is likely to have been a second factor behind Sivaswamy Aiyar's scepticism. Since Birckbeck introduced—about a century ago—experimental demonstration in teaching the pure sciences, by a knowledge of which the work of artisans could become more intelligent, experiment has come to be recognised as a necessary feature of a science and thus the term science was brought into vogue and its scope was restricted. Before that, even what is now called 'science' was not called science; it was called natural philosophy. This old term was continued till the turn of the present century when the wide-spread use of experiments led to its replacement by the term science used in a restricted sense. But this is too restricted a sense brought about by the new-born concept of experimental study. For, think of astronomy; it has been unquestionably taken all along to be a science. It is pursued not through experimentation

but through observation. Indeed a study based on observation is threatened to be disallowed the name 'science' even as the first child is disallowed the name 'baby' as soon as the second child is born. To evade this danger, Jeans makes a different approach. According to him, "A science teaches us to know and an art to do ; and all the more perfect sciences lead to the creation of corresponding useful arts. Astronomy is the foundation of navigation". Genung's illustration is more to the point. "Rhetoric, here called an art, is sometimes defined as a science. Both designations are true. Science is systematised knowledge ; if the laws and principles of discourse are exhibited in an ordered and inter-related system they appear in the character of a science. Art is knowledge made efficient by skill : if the rhetorical laws and principles are applied in the actual construction of discourse, they become the working rules of an art". This view does not restrict the mode of derivation of laws and principles to experimentation but retains observation too as a mode as it has been in the science of astronomy. On the anology of Genung's illustration, we may concede that there is an Art of Librarianship ; but it can not be denied that there can also be a Library Science on which that art has to be based. It is in this view that usage allows terms like Agricultural Science, Veterinary Science, Linguistic Science, Psychological Science, Historical Science, Economic Science and Social Science.

67 Mathematical Treatment

Being amenable to mathematical treatment is often implied in the restriction of the scope of the term science. In that case, the claim of a body of knowledge to be called a science is dependent not only on its capacity to admit mathematics as a tool in its study but equally also on the capacity of mathematics to be used as a tool in its study. Indeed mathematics is not static ;

it is ever growing to meet the challenge of subject after subject to show its capacity to serve as a tool in their study. Till it found a godfather in Newton, its capacity was restricted by the capacity of discrete numbers and as such there could have been before his time but a few sciences, *i. e.*, subjects amenable to mathematical treatment. The invention of fluxions, or calculus, to extend the capacity of mathematics to deal with a continuum automatically extended also the capacity of the word 'science'. Later the term 'exact sciences' was coined to emphasise the idea that a science must be amenable to mathematical treatment, *i. e.*, to exact mathematical measurement. This view kept out economics, for example, from the claim to be called a science. The nineteenth century brought about another addition to the capacity of mathematics and thereby to the capacity of the word 'science'. The beginnings of this new capacity of mathematics are traceable to Gauss who invented the Curve of Error to determine the most probable value of the measure of something measured in the course of observation or experimentation. Galton applied this concept to Genetics. Karl Pearson and a few others developed this new capacity of mathematics and enabled it to throw forth a new branch called "Statistical Analysis". This branch of mathematics enables one to formulate Laws which are true when applied to a universe of a large number of entities, though nothing can be asserted about a particular entity in it. These laws are said to have statistical validity and no more. For example, statistical method has led to the observation that, of a random sample of a large number of throws of dice, each of the six sides will be thrown up in a sixth of the throws ; but it does not help us to assert which side will be thrown up in a particular throw. Again with this new capacity, mathematics has helped actuaries to enunciate that of all the babies which come out in

a large community within a year, 501 out of 1000 will be females. This law has only statistical validity and is not of help in predicting that the particular baby which is expected to come out in Kuchela's house will be a female. This new class of laws differ in this respect from the laws which could be formulated with the mathematics of pre-statistical age. To put it in other words, the development by mathematics of capacity to deal with statistical data, to lay bare phenomena which lie deep beneath a plethora of easily visible ones and to help the formulation of Laws of statistical validity has brought many subjects within the capacity of the term 'science'. It has enabled an old science like Physics to throw forth the new branch of Nuclear Physics and Statistical Mechanics. Karl Pearson started the use of the suffix "Metrics" to emphasise the admission of a subject to the realm of science. He called his laboratory "biometric laboratory", named one of his periodicals *Biometrika* and called his co-workers 'biometricians' to emphasise that his field of study was amenable to mathematical treatment including statistical treatment. Since then, parts of several subjects have put on the suffix 'metrics' or 'metry' to enforce their claim to the name 'science', *e. g.*, Phonometrics, Psychometrics, Econometrics and Anthropometry. The true significance of this tendency is that the new capacity of mathematics has enabled many branches of study to come within the purview of another dictionary definition of science *viz.* "Concerned with observation and classification of facts, especially with the establishment (and, strictly the quantitative formulation) of verifiable general laws, chiefly by induction and hypothesis." Is there ground to speak of a Library Science in this sense ? Here is an observation of Sir Mirza Ismail which contains a positive testimony. It is taken from his welcome address to the Sixth All India Library Conference held at Jaipur in 1944, in which he referred to a symposium of articles contributed

by some of us to an earlier conference at Bombay ; "When one glances through the volumes of proceedings, one is at first dismayed by the extremely recondite titles of many of the papers and their statistical appearance." You will see that the tool of mathematics has to be used in the study of several aspects of our subject—classification, cataloguing, book selection, book-arrangement and library organisation.

68 Topology as a Tool

We have also to remember that the capacity of Mathematics as a tool is inexhaustible. In one of the new branches it has thrown —Topology—it has freed itself from the shackles of quantitative measurement and deals solely with qualitative data. Topological mathematics embodies the doctrine of those properties of a figure that are unaffected by any deformation without tearing or joining. Mathematics without quantity may bring a sigh of relief to many ! Whether it does so or not, it does bring many new subjects into the category of sciences. For example, till recently it was only Experimental Psychology and Psychometrics that were recognised as the branches of psychology fit to be called a science. But now Kurt Lewin has brought Field Psychology within the purview of topological mathematics and thus made it a science. He calls his subject "Topological Psychology". In this he links Psychology with Topology through the concept of 'Life-space' (L) (Topology of facts which determine the behaviour (B) of an individual at a certain moment). Denoting Person by P and Environment by E, he starts with the equation $B = f(L) = f(P, E)$. I have made this digression to suggest to you, that the subject of our study is amenable to treatment not only by statistical and metrical mathematics but may also be amenable to treatment by non-quantitative, qualitative, topological mathematics. I have not yet succeeded in isolating branches of our subject

which can be studied topologically ; nor have I yet heard of anybody else having done so. But, who knows, the Department of Library Science of this University may one day succeed in this task. Whatever it be, it is too late in the day, and it may also be risky to use mathematics as a means for keeping out our subject from its claim to be a Science. Mathematics has already developed capacity to deal with library phenomena and reciprocally library phenomena are amenable to mathematical treatment. Thus, even by this test, we can say that there is a Library Science.

69 Reminding of King Canute

Let me conclude by saying that whenever there is the slightest possibility of the human mind to know, there is a legitimate problem for science. Who can assert that the fields already occupied by Science are alone those in which knowledge is possible ? In some science—as in mental, social or library science—the facts are more difficult to classify and the bias of individual opinion is much stronger. It may be more difficult to make a judgment without personal bias or without an unconscious subservience to a dogma. So it was with astronomy and physics too in the days of Galileo. It is want of impersonal judgment, scientific method and accurate insight into facts—a want largely due to non-scientific training—which renders clear thinking so rare and random, and irresponsible judgments so common, in the mass of our citizens to-day—and, alas, not yet quite uncommon even in university circles, with the result that such high circles sometimes develop a bigotry which puts up an iron wall against new claimants to the status of Science and refuses a hearing to them. But, they remind one of King Canute. Let us pity them and go forward. All honour to the University of Delhi which has escaped the blight of such an unscientific attitude and bigotry.

I shall devote the next lecture to the Laws of Library Science.

LECTURE 7

The Laws of Library Science

In the last lecture, I showed that the claim of Library Science to include the word 'science' in its name is based not on its subject-matter but on the fact that the various library phenomena are contained in a few simple statements or laws which are liable to be overlooked as trivial. The definition I quoted from the *New English dictionary* stressed the additional requirement that these laws must be such that new facts and practices belonging to the domain of Library Science should be derivable from them.

70 Groping in the Dark

From 1925 to 1928 my mind was, so to speak, split into several parts. One part was experimenting on and shaping the classification scheme. Another was forging the cataloguing technique. A third was given over to the rendering of reference service to readers single-handed, and was getting itself enriched by the experience gained thereby. Another was turned on observing the repetitive jobs of administration with a view to standardising and simplifying them. A fifth had to be running months ahead exploring the organisational and building needs. These parts of the mind were in comparative ease. There was peace on the emotional side too as communal poison had not yet entered educational field. But the sixth part of the mind was in a painfully restless state. It was brooding with excitement over the labyrinth of the multitudinous facts and practices observed and recorded while wandering amidst British libraries. This part was

continuously feeling the anticipation of intense emotions which always accompany scientific work: the sleepless nights in which imagination is most vivid and the controlling criticism weakest, the ecstacy of seeing the light, the despair when a long and tedious road leads nowhere, and the attractive mixture of happiness and unhappiness. Early in 1928 the task of transfering the library to a building some three miles away had evidently driven this brooding part of the mind to the farthest layers of the sub-conscious. But after the completion of the mechanical work of transfer, the tantalising evasion of the Laws of Library Science came again to the conscious level. I was feeling like one groping in the dark for a hidden treasure.

701 Appearance of Light

A great help came about this time. It came from Mr. Edward B. Ross. I owe my mental being to him. Ever since 1909 when he began teaching mathematics to me, and even till today, it is his personality—first in flesh and blood and later in spirit—which is guiding me in all my thinking. In its new habitation my library was on the way of Prof. Ross from his house to the college and back. This facilitated our meeting frequently. He took a deep interest in my work in my new field. From day to day I used to tell him about my progress as well as difficulties. The chief difficulty which used to recur in my report to him was my groping for the hidden Laws of Library Science. We used to formulate them in different ways from time to time, but they continued to be refractory. One evening, when Prof. Ross dropped in at about 4 P. M., we made a final plunge, as it were, and were absorbed for nearly two hours in locating the Laws. It was about 6 P. M. The Professor started out to go home. He was just getting on his motor cycle. The twilight was fading.

Suddenly there appeared a characteristic gleam in his eyes and a characteristic rounding of his lips—precursors of a brilliant new idea. I was all expectation. Professor Ross said, "You mean: Books are for use," smiled and started off in his cycle. I got it. I got relieved. I was dancing with joy. I had found my First Law. My Professor had given it to me.

71 First Law

"Books are for use." How simple, how trivial and yet how seminal! How much of library technique and practice it holds within itself! All the endless work in a library—book selection, book purchase, accessioning, classification, cataloguing, shelf-arrangement, book-display, circulation work, publicity work and reference service—every job in a library is for the fulfilment of the First Law, "Books are for use." A library should acquire, organise and keep books not for ornamental purposes, not as a ritual appendage of a school, college, university, town or business house, nor as for a museum exhibition, in glass-cases, of rare-books, incunabula and books of odd shapes and sizes—not for any of these purposes but for use.

711 Book Exhibition

When I was in Bombay in 1946, to deliver the centenary address of the People's Library, we were treated to a book exhibition. But what did they exhibit? Old newspapers, defunct dictionaries and outmoded books! "Is it to promote use of books? Or is it to excite admiration for the unuseable treasures still preserved? Are they honouring me or mocking at me?" whispered the First Law into my ears. Two years earlier, I was asked to open a book-exhibition by an enterprising book-selling concern in Madras. They were all books of the hour—brand new books, with shining jackets and arresting titles. They

were artistically displayed and backed by smart interpreters. The First Law was dancing with joy.

712 Attractive Books

The First Law warns us that books are drab, artificial entities. Their drabness should be minimised by libraries buying sumptuous editions in large paper, with fine print and plenty of illustrations. Their external look should invite people to pick them up and, when opened, they should be pleasant to read. They should also be kept clean and in good repair. When soiled by use, the copy has lived its full life; and it must be discarded without any Victorian attachment to it as if it were property. If the work is still in vogue, another fresh copy should be brought in.

713 Enlivening the Books

The First Law asks us to remember that the function of a book is to transmit thought but that it has to do so under a great handicap. Thought is best transmitted while in a nascent state by the very person who creates it. It will then have the fullest benefit of his fervour of creation—the modulation of voice, the gesticulation of the limbs, the expression of the face, the movement of the eyes — the participation of the whole personality, in fact. But in a book it is without any of these aids. The thought lies materialised in cold print. It is fixed and neither protein nor adjusted to the needs of the recipient. The First Law would, therefore, plead that the library authorities would be failing in their duty if they did not provide for the enlivening of books through living persons who are at once friends of the books and of the readers. Walk into the little library of the United States Information Service at Bombay, Calcutta or Delhi and compare the area of the room and the number of books with the number of persons who have no other work but that of promot-

ing the use of books by personal attention. Is it a wonder that the First Law praises the United States as a land of libraries ! What does it say to India ? It tells her that shelves choked with books do not constitute a library. Even if you provide a handful of staff to look after them, you do not make a library. Nay, even if you turn a crowd of readers into your library — but leave them to their own wits, you don't have a library. You have a library only at the moment when the books get enlivened and integrated with readers by the cheerful effort of the staff. It has been saying this to all countries. Many of them have listened to it and made libraries of their book collections. The First Law is disappointed with the library authorities in India. It appeals to you to become its advocates and convert India too to its faith. This implication of the First Law you will learn in detail when you do the course on reference service.

714 Material Tests

The First Law has certain material tests to find out if it is respected by a library. It looks at the building; if it is smart, bright and soothing, it feels satisfied. It steps in and sees; if the seats are comfortable, the table-space is ample, the lighting is pleasant, the ventilation is adequate and the flooring is sound-proof, it feels satisfied; it knows that the necessary silence will then prevail. It walks into the stack-room; if the gangways are broad, the topmost shelves of the book-racks are within reach of a person of normal height, and if there are guides for every tier, gangway, bay and shelf-plank, if the lighting is soothing and if the books are in open shelves and readers walk along-side them and handle them without any obstruction, it is satisfied. It asks about the working hours; if it hears that the library works on all days and in all waking hours, it is satisfied. Then it says "You have done everything that is materially possible to promote

the use of books and you have every chance to become a true library, if you are equally thoughtful to provide enough reference librarians to help contact between readers and books." This material equipment of the library will be gone into fully when you learn about library organization.

72 Second Law

The Second Law sounds as simple as the First. It is "Books are for All". Some of you may wonder if it is necessary to regard this as an independent Law. Yes, it is. Because this idea is not contained in the First Law either explicitly or implicitly. It is possible to grant that books are for use and yet restrict their use to the chosen few. Indeed this is what has been done in most countries till very recently. That it has been so can be inferred from the fact that the book-market itself had seldom books suited to the needs or the standards of the common man.

721 Advent of Democracy

The force of the Second Law came to be recognised only after the advent of democracy—*i.e.* after it was granted that all persons should have an equal opportunity to continue their self-education all through life through books, no matter what their vocation or their mental capacity or their social position was. Such a democratic backing of the Second Law took shape in the West only during the nineteenth century. In our own country it is yet to take shape. Even in the West it took a much longer time to recognise the implication of the Second Law that Library service should be extended to children and the rural folk. This extension gained in intensity only after the First World War. In our own land the claims of children and rural folk have not yet been recognised ; but the Second Law forces them on our attention.

Again the "ALL" in the Second Law includes the blind people too. A corresponding consequence of the Second Law has been the establishment of National Libraries for the Blind in most of the countries, preparing, storing and circulating special books called Braille books which can be read by the blind people by the tips of their fingers. The "ALL" in the "BOOKS FOR ALL" demands also that library service should be extended to the patients in hospitals, the prisoners in jails and the sailors on board the ships. Indeed the chorus of the Second Law is as given below :

"There's room for all.
Let not the mean
Or learned dean
Restrict the books
To a favoured few.

We've Books for all.
Books for the rich,
And Books for the poor;
Books for the man,
And Books for the dame.

Books for the sick,
And Books for the fit;
Books for the blind,
And Books for the dumb.

Books for the bungler,
And Books for the wrangler;
Books for the burgher,
And Books for the cotter.

Books for the lettered,
And Books for the fettered;
We've Books for all,
For one and all.

Books for all ; yes, Books for all
If and only if you add
Books for the land
And books for the sea.

722 Library Legislation

To provide books for one and all in the nation in this exhaustive way, the Second Law demands that the library provision of a nation should be placed on a statutary basis. This legislative demand has been already met by many of the countries of the West. The Second Law would plead with the people's Government now established in the Centre and the constituent States that the first step in the provision of "Books for All" should be the passing of a Library Act. It would also plead with the Union Government that wisdom and national economy would indicate the establishment of a grand National Central Library as the apex of the library system of the country to function as a general reservoir from which any library may draw the books that are wanted by its readers only occasionally. I am glad to add that the Government of Madras has, since the delivery of these Lectures introduced the Library Bill into the legislature and that the Government of India has appointed a Committee of Experts to examine the proposal for a National Central Library. These implications of the Second Law will be examined in detail when you do Library Organisation.

723 Range of Book Collection

This Second Law will yield further inferences if we throw it in the form "Every Reader, His Book".

This indicates what books a library should buy. It shows that the library should inform itself of the interests of its

clientele. If it is a public library, for example, it should provide books on the occupation of the people of the locality. If it is a school library, it should collect books not only bearing on the curriculum of studies, but also on all conceivable arts and crafts, sciences and histories, and biographies and travels, since the curiosity of the children knows no bounds. Both in public and school libraries there should be not only the above-mentioned informative books but also light literature for relaxation without the harmful effects which other forms of relaxation, like card-play, produce. There should also be profound books which will rouse up and satisfy the urge for inner life and turn the mind towards the sublime and the eternal. The Second Law shows also that the subtle body of the books, the language and the style, should be sufficiently varied. The library should have books which can be understood by the most learned as well as the least learned, by the mature old man as well as an immature child, and by all else in the intermediate stages. The Second Law has something to say about the physical body, too, of the books. It should acquire for the children, for example, books in large types and large paper. In a business library the books acquired must be closely related to all the aspects of the business pursued by its parent body. Such implications of the Second Law will be gone into in your course on book-selection.

73 Third Law

When we turn to the Third Law, we find it even more exacting. It is "Every Book, Its Reader." It declares, as it were, that the destiny of a book is the reader's hand. We can infer much from this Law if we remember that a book is in an inert condition; it cannot of its own accord hop into the hands of its readers, nor has it a voice audible to its readers. It depends solely on the librarian to take it to its readers or to bring its

readers to it. Every book, be it remembered, which is obliged to be confined to the shelves of the library for days and days, will cast a curse on the librarian.

731 Library Publicity

To escape it, the librarian should go out amidst people, canvassing for readers. He should bring to the notice of probable readers the arrival of new books and the existence of old neglected books, from time to time. He may do so either by circulating a library bulletin (hand-written or typed or printed according to the means of the library) or through the columns of local newspapers or by announcements in public gatherings. He should also bring the service of the library in a general way to the notice of the people by judicious announcements in newspapers, by addressing public meetings, by the distribution of handbills and by visits to workshops, educational institutions, clubs and even individual homes. In other words, he should employ every form of publicity to attract people to the library. He should not rest on his oars until he is satisfied that every person of the locality has become a regular visitor of the library. This means, in effect, that he must be ever alert in his publicity work. Books are artificial entities. People do not take to books easily. It takes years and years to make a community read books adequately; for example, in a British town called Croydon its public library has been in existence for more than fifty years. It is being worked very efficiently and the people of Croydon are all literate. And yet that library has succeeded in all its 50 years in enlisting only 60 per cent of the people as its regular visitors. Remember that it is a free library. There is no need even to make a deposit of caution money. There has been no end of publicity activities. And yet 40 percent of the people are yet to be brought to the library. This should warn the Library Authorities of India. Our people are now mostly illiterate.

Even those that are literate have little of book-habit. Neither at school, nor at office, nor at home have they been accustomed to turn to books for information, recreation or inspiration. Nor have they had a chance to see other people doing so, as the people of Croydon have had. Moreover, the books produced in India to-day are not half as attractive as the books produced in England. Again, we do not yet have books on all the arts and crafts, nor books on current thought in sufficient number and variety to pull the people towards our libraries, as the library at Croydon does. All this shows the great handicap which prevents our people from taking to books without persuasion and publicity. Let them not blame our people as unmindful of books, if people do not come to the library; the fault should be traced not to the people, but to the librarians and the Library Authorities. It is the duty of these to do everything necessary to get readers for every book, and for this purpose to attract everybody to the library by every available means of publicity. They will take years to succeed in this work. Patience, persistence and faith are necessary. The technique of library publicity will be developed while doing the course on Reference Service.

732 Cultivation of Reading Habit in Childhood

Experience in other countries has shown that any amount of publicity does not succeed in turning all the adults of a locality into regular patrons of library and thereby raise the chance for every book to get its reader, to its maximum. This failure of publicity when turned on adults alone is traceable to the common human trait that it is difficult to form new habits late in life. It is so not only in bodily habits but also in mental habits. It is due to rigidity setting in with age both in the body and the mind. In our own country, to-day, even the little chance to pick up reading habit late in life is smothered by the prejudice against books induced in young minds by the forced way in

which all teaching and learning is centred round the single text-book in each subject without any regard to the varying requirements of the different students. You will realise how deep-rooted this pernicious single-book method is from the following experience of mine. Some years ago, the Madras Library Association succeeded in inducing the Department of Education to make a weekly library hour compulsory in the school classes. The head-masters and teachers desired to know how such hours should be used. The Director, therefore, asked me to give a refresher course of 20 lectures on the subject. By the bye, these lectures. ultimately got embodied in the book *School and College libraries*. You will find from that book that the main emphasis of the course of lectures was that the teaching technique must be changed from mass-method to individual instruction and as a corollary the single text-book must give place to many books. By the time the lectures came to be actually delivered, a new person had become the Director. He was a friend of mine and he desired to attend one of the lectures. But he came towards the end of the course, when the many-books-idea had been well established and the talk had turned on library room and equipment and other matters. He was a good man. At the end of my talk, he desired to address the teachers. I welcomed it because it would add to the prestige of the course. Within a few minutes, he reached the stage of haranguing, "Gentlemen, with my twenty-five years of experience in teaching, the one advice that I desire to give you is 'Don't confuse the pupils by suggesting several books on the same topic. Choose a good text-book, confine yourself to it and make all the students also to confine themselves to it. This is a cardinal principle in teaching' ". There was a thunderous clap of hands and a hilarious laughter. The Director took it as a mark of appreciation and acceptance and prolonged his peroration with great vehemence! School life lived under such a system naturally repels our

educated adults from books. A plea of the Third Law is "You can't succeed in creating reading habit after adulthood is reached. Begin creating it even in childhood, even at school stage. Then only, you can bring to a maximum the chance of every book to get its reader." The technique of cultivating reading habit in children will be learnt in the second year of the course by those of you who choose "Academic libraries" as their special subject.

733 Subject Analyticals

The Third Law would make us remember that most books are composite in their scope. In other words they are multifocal. A book is turned on several specific subjects. The title does not disclose all of them. The main-subject entry in the catalogue does not bring out the secondary subjects. The chance for its getting its readers will certainly be increased if the catalogue gives it additional subject-entries under the name of each of the other specific subjects which it treats about. These entries are called cross-reference entries or subject analyticals. The choice, rendering and style of writing of such entries will be learnt by you when you do 'Cataloguing.'

734 Book Display

If such entries are demanded by the Third Law to bring to light specific subjects hidden within books, exhibitions of stay-at-home books is demanded by it to bring to light books hidden away in the shelves—the forgotten books. Display of such books by turns at the display window is also suggested. Indeed the Third Law would ask of the library architect even to excel architects of commercial buildings in the design of attractive shop-windows or display-windows, as I would re-name them. The Third Law would even demand that the entire stack-room should be designed and maintained as a display

room without monotonous sameness of arrangement of books but with dexterous variations made from time to time so as to throw unused books on to the notice of probable readers.

735 Independence of Third Law

Before we pass on to the next Law, we must examine if the Third Law is really fundamental or is derivable from the First two Laws. In other words, do the First and the Second Laws contain it jointly or severally? I want you to think about this.

A student: I think it is.

Then derive it. Let us proceed systematically and satisfy ourselves about it. For it is wrong to lengthen the list of the laws of a science by adding to it what can be deduced from others. Let us first examine if "Every book, its reader" can be deduced from "Every reader, his book".

The class: It can be. As the number of readers is very large, if every reader gets his book, every book also would have incidentally got its reader.

I think one or two examples will convince you that the one does not mean the other. Suppose that you have a feast in your house with a large number of guests and you buy vegetables. As a thoughtful host, you must buy for every guest the vegetable which he needs. Suppose you do so. Do you think that in this process you would be obliged to buy every kind of thing which grows on earth ?

The class: There is every chance for it.

Surely you don't hope to find some one or other to eat every kind of plant which grows on earth. Of course, if you restrict the universe of plants strictly to what are used for culinary purposes, what you say may be true. The very use of

the adjective 'culinary' to restrict the universe of plants has predetermined the issue. It is based on the knowledge that some plants can not get anybody to eat them. In the universe of books we can not allow such a contingency unless we have a Law which restricts purchase of books to what the librarian prefers, in order to escape the course of the Third Law.

Let us next examine if "Every book, its reader" can be deduced from "Books are for use".

The class: If books are for use, it follows that every book should be used. This is only an emphatic, alternative way of stating the First Law, as we give the Second Law "Books are for all" the alternative form "Every reader, his book."

There is much in this objection. Books are for use implies that every book is for use. But its contents may be exhausted by merely putting no restriction in the way of its being used—any restriction similar to the proscribing of books by a Government. As we have seen already, the content of the Third Law includes an obligation on the part of the library staff to leave no stone unturned, as the saying goes, to secure readers for every book. It is one thing to say "Allow every book to be used" and another to say "Endeavour and secure some persons to read it; you should not only not rest on your oars until you have found them once but you should find them again and again."

74 Fourth Law

If the Third Law enjoins on school authorities and teachers the cultivation of libray habit in school children and enjoins on library authorities and libraries the duty of making all the people of the locality visit the library in order to increase the chance for every book to get its reader, the Fourth Law enjoins even a more sacred duty. That is to retain the custom of those who

come to the library at least once. This Law is "Save the Time of the Reader". The time of the reader must be saved if the psychological tempo necessary to make him love coming again to the library is to be preserved. To do this, the library authorities should provide an adequate number of reference librarians. A reference librarian should, with a cheerful face, welcome and receive every visitor to the library. He should, in a friendly and pleasant way, help each visitor to enunciate his requirements. He should put him alongside the books and the periodicals that can meet his requirements. He should indeed work with the reader in his hunt for information, inspiration or relaxation.

741 Qualifications for Reference Librarians

To do this effectively, the Reference Librarian should have two qualifications. He must have an urge for social service; he must love humanity; he must have faith in the ability of books to help humanity. He should also have a broad acquaintance with every section of the field of knowledge, of the collection of his library and the scope and structure of the books; and he must be thoroughly familiar with the arrangement of the books on the shelves and the intricacies of the library catalogue. This makes us see also the dependence of the efficiency of reference service on helpful shelf-arrangement of books and a well-prepared library catalogue.

742 Subjective Time

The preservation of the psychological tempo of the reader needs not only the saving of his time by prompt personal service but also the avoidance of any moment whatever when he would be obliged to wait in idleness. In other words, the Fourth Law insists that the saving of the subjective time of the reader is even more improtant than that of objective time. Let me illustrate. I was studying the working of the big central library

of the city of Glasgow. I found that the application slip for every book was being stamped with a time-piece which had its dial and the minute and hour hands in rubber. The time-piece had to be banged with force on every application slip. One can imagine how short-lived the time-piece would have been and how much money that library should be spending on the purchase of this special make of time-piece. I asked the librarian why they were indulging in that expensive luxury. The following scene which I witnessed some time later demonstrated that it was not a luxury but a necessity to preserve the psychological tempo of the reader by making him see the illusion which his subjective sense of time had created in him. A reader protested with the issue-clerk that he had waited for ages to get his book ; he was fretting and fuming ; he was swearing that he would not any more come to that library which was wasting his time. The librarian and myself approached him and asked gently how long he had waited. He said he had waited at least for quarter of an hour. The book arrived. The reader was asked to note the time of his receiving the book and he was told that he had waited only for five minutes. "How do you know ?" he asked and said, "I know I have waited for more than fifteen minutes". He was shown the rubber stamped face of the time-piece on his application slip. This convinced him that he was under an illusion caused by waiting in idleness and he promised to continue to be a patron of the library.

743 Open Access

In modern library practice, the illusion about subjective time is eliminated absolutely and the objective time also is saved considerably by two new devices. The first device is called "open access". It consists of allowing each reader to walk into the stack-room, to walk up to the book-shelves and to handle any book he likes with as little hindrance as he could in the

case of his private collection at home. The consequences of open access will the described in your course on Library Buildings.

744 Issue Method

The Second device is the "book-card, reader's-ticket" method of issuing books. In this method, the reader need not spend time in writing out an application for the book he desires to borrow or in waiting for the issue clerk to write the name of the book or his name. As the first device, *i. e.*, open access, makes the reader busy till he picks out his book, there is no illusion of time being wasted *i. e.*, there is no waste of subjective time. In the second device which concerns the issue method, wastage of objective time is reduced to very near zero. The issue method will be learned by you when you do Library Administration.

745 Library Classification

To minimise the expenditure of the objective time of the reader in an "open access" library, it is necessary that the books should be arranged in a helpful order. The books in a specific subject should be grouped together and the groups in the different specific subjects—and for this purpose the specific subjects themselves—should follow one another in a filiatory order. Such an arrangement of specific subjects, the helpful arrangement of the books in a specific subject among themselves and the determination of the specific subject itself form an important branch of Library Science. It is called Library Classification. In library classification each book is given a unique ordinal number, called its Call Number. The Call Number consists of two parts : the Class Number and the Book Number. For example, the Call Number of the book embodying these lectures will be 2*y*8 H8. It will be given at the back of its title page. '2*y*8' is the Class Number and it means "Scope of Library Science"

H8 is the Book Number and it means 1948, the year of publication of the book. The Class Number is a translation into ordinal numbers of the name of the specific subject of the book and the Book Number, of some others of its features. For this purpose, an artificial language of ordinal numbers has to be used. Such an artificial language of ordinal numbers is called a Classification Scheme. The following is a list of the well-known published schemes of classification :—

Name	Year of 1st Publication	Author	Country
1. Decimal Classification	1876	Melvil Dewey	U. S. A.
2. Expansive Classification	1891	C. A. Cutter	U. S. A.
3. Congress Classification	1904	Library of Congress	U. S. A.
4. Subject Classification	1906	J. D. Brown	England
5. Colon Classification	1933	S. R. Ranganthan	India
6. Bibliographic Classification	1935	H. E. Bliss	U. S. A.

7451 Colon Classification

Of these the Colon Classification was invented in India. It is naturally very strong where the other schemes fail *viz.* in classifying Indian literature and Indology *i. e.* subjects like Ayurveda, Indian literature, Indian linguistics, Vedic religion, Jainism, Buddhism and Indian Philosophy, Geography, History, Economics and Law. Moreover, it has more elements of universal applicability than any other scheme. It can handle non-Indian culture and books with the same thoroughness with which it handles Indian culture and books. It can also handle future knowledge with as much ease as it can handle past and present knowledge. This is a feature in which it excels the other schemes. As described by a British Librarian,

"every new subject brings its own Colon Number in its pocket." The art of translating the names of specific subjects into Colon and Decimal Numbers will be learnt by you during the first year and that of translating into Universal Decimal Numbers also will be gone into in the second year.

7451 In Relation to First Law

A well-classified arrangement of books will not only save the time of the reader and satisfy the Fourth Law but will also increase the use of books, *i.e.* satisfy the First Law provided adequate guides are put up—tier gudies, which show what books are in the tier concerned; gangway guides which show what books are in the bays of the book-racks facing the gangway concerned; bay guides announcing what specific subjects will be found in the bay concerned; shelf-guides pointing out the specific subjects to which the books in the shelf concerned belong. These guides will give the names of the specific subjects in the natural language and also mention their translations into the artificial language of ordinal numbers. Further, the back of each book will have a tag which gives its Call Number. Such a profusion of helpful guides will be a means of education for a reader who walks alongside the bookshelves in the stack-room and will help to increase the use of books.

7452 In Relation to Second Law

Further, as the Classification Scheme throws together all the books on a specific subject and arranges the specific subjects themselves in a natural order which respect their filiation to one another, the Second Law also will be satisfied *i. e.* every reader will have a good chance to find his book. For example a reader who seeks information, say on Taxation, wil find all the books on Taxation together; to their left will come the books on Public Finance which will have chapters on

Taxation. To the left of these will come the books on Money and Currency. Further to the left will come the general books on Economics which too will contain chapters on Taxation. On the way to these shelves, he would have passed through those which contain books on History which he may require for background study. To the right of the books on Taxation will come books on Insurance, and Tariff on individual commodities.

7453 In Relation to Third Law

Such a display of books will not only help every reader to find his book without loss of time but also increase the chance for every book to find its reader.

746 Library Catalogue

As important as library classification is the Library Catalogue in fulfilling the Laws of Library Science. It can be and ought to be so constructed as to further the use of books, help every reader to find his book, help every book to find its reader and save the time of the reader. A reader may remember a book through the name of its author, series, or any collaborator with the author, such as editor, translator and commentator or through its subject. This means that the catalogue should enter each book under several names—such as those of author, series, editor, translator, commentator and specific subject—in so far as they exist for it. All these names will be in the natural language. Therefore, the entries, which begin with such names, or Headings as they are called, will have to be arranged alphabetically by their headings. Usually, entries of this kind are believed to exhaust a library catalogue. But it is not so in fact. These will form only half of a properly prepared library catalogue. No doubt this half is necessary. But it is not sufficient. It may be called the Alphabetical Part

of the catalogue as its entries are arranged alphabetically. The other half will consist of entries which begin with class numbers *i.e.* the names of specific subjects expressed as ordinal numbers *i.e.* in the artificial classificatory language of ordinal numbers instead of in the natural language. Each book will get one such entry to represent its main specific subject and as many other such entries as there are subsidiary specific subjects occurring in it. The former entry is called the Main Entry of the book and the latter are Cross Reference Entries. They are also called Subject Analyticals. All these entries will be arranged by the ordinal numbers with which they begin. This half is therefore called the Classified Part of the catalogue. This Part serves a much deeper and subtler purpose than the alphabetical part.

7461 Function of Classified Part

If the reader's interest is for a particular book by a particular author or in a particular series, the alphabetical part is sufficient by itself to satisfy his want. But whatever is brought up and however wide of mark it may be, the alphabetical part tells him, as it were, "For all books on the subject you mention and on all connected subjects, look up the region of the Classified Part covered by number so and so". There he finds displayed the full field of his interest. When he enters it he finds all that he was vaguely conscious of having wanted; and indeed it is only then that he is able to know the exact thing he wanted. It is only a catalogue with two such parts that can help every reader to find his book without waste of time.

Details of the method of constructing such a catalogue will be one of the major things to be learnt by you throughout the course.

747 Standardisation. Simplification

The Fourth Law contains another inference. We have seen so far that in order to save the time of the reader, the

library staff should find time to attend to each reader individually. This implies not only more staff than is easily seen to be necessary by library authorities but also saving the time of the staff itself in getting through the routine work involved in the administration of the library, which, by the bye, should never be allowed to accumulate into arrears. To save the time of routine, full advantage must be taken of standardisation and simplification of procedure. The card system of records and the system of vertical filing may well be claimed as contributions of the library profession to the other professions and trades. These systems were evolved under the pressure of the Fourth Law. You will learn about this when you do Library Administration.

748 Centralisation

Centralisation of impersonal processes like classification and cataloguing is another suggestion of the Fourth Law to release more of the staff of a library for the human and personal purpose of Reference Service. It pleads: "What is it that is gained by copies of the self-same book being classified and catalogued by a thousand different persons in a thousand different libraries in the land? Will not the same result of classification and cataloguing be achieved with greater uniformity and consistency if each book is classified at the Provincial or the National Central Library, as the case may be, and its catalogue cards printed with the call numbers by the same Central Body and supplied to each of the thousand libraries? For every thousand books added to a library in a year, such a centralisation will release one member of the library staff and the library can get a better return for his time by turning him on to reference service. In countires with long established libraries, in countries where each library had been accustomed to do its own classification and cataloguing before the habit of

viewing things from the high view point of national economy in the light of reason was uncoloured by sentiment, local prestige prevents the introduction of centralization of this sort. But why should not India take advantage of her starting her library movement virtually from a scratch in this late hour, when rational planning with the nation as the unit has come into vogue, by straightaway commencing with centralised classification and cataloguing? Let not her librarians be confused by the misgivings of countries which have drifted into their present library position, which, advanced though it be in many respects, has to allow many wasteful practices to continue as they have entrenched themselves behind strong-minded prestige. Mr. Edward J. Carter, Head of the Libraries Section of the UNESCO, for example, endorses my view with these words. "I am impressed by your remark that it is too late now for India to develop its library service in a casual and laissez-faire manner — you must jump several steps and by so doing, it is quite possible that you will jump ahead of countries whose development has been gradual." Again Norway has already begun to practise centralisation. Here is what the Chief of the Library Office of the Government of Norway says on the point :-

"Considering your plan of a coordination of library classifying and cataloguing it may interest you to learn that we have had this for a good many years for the public libraries of Norway. A special auxiliary office in cooperation with the library division of the government attends to the work, providing the libraries with books solidly bound and furnished with classification marks on the backs, book-packets, book-cards ahd date-label inside the cover and with printed catalog cards which are sent along with the books."

75 Fifth Law

The Fifth Law is of a different nature. It acts often as a corrective to the excesses to which the other Laws may other-

wise lead. It does not view as a whole the trinity in a library — the reader, the book and the staff — as the other Laws do. No doubt it is concerned with the growth of each of these severally and of the repercussions of the growth of one upon that of another. Before we examine these, we have to recognise at the outset that organic growth may be of two kinds — growth by accretion and growth by replacement or renewal — growth as of the body of a child and growth as of the body of an adult. As the body of a child grows steadily in height and weight, so a newly started library grows steadily in the number of its readers, books and staff. As there is, however, an upper limit to the height and weight of a growing person, an ultimate upper limit can be envisaged to the number of readers, books and staff of most libraries - a chief exception (a third class) being the National Central Library.

751 Indian Libraries of To-day

In the India of to-day, we have no library, yet, of the third class which grows for ever in size. Nor have we many libraries of the second class which have reached adulthood. Most of the few libraries which we have are in the toddler stage and the majority of them are yet to be born. Most of you will have, therefore, to spend your life-time with libraries that grow in the first sense *i. e.* grow in the number of readers, books and staff. I myself have spent my life-time in this way. I shall, therefore, discuss with you, first, libraries of this class.

7511 Transitory Phase

I may start with saying that the growth of a library has really to stem from growth in the number of readers. This is what the First and the Third Laws indicate. The first charge on the thought and time of the librarians of the present generation in India should be persuasion of the public

to use the library. Since 85 per cent of the people are illiterate, an offer must be made to read out and expound books to the illiterate and to help and co-operate with every local organaization engaged in the liquidation of illiteracy. This will be a transitory phase of the work of our libraries for nearly a generation.

752 Growth in the Number of Readers

But even assuming that literacy is universal, it will take several years for a library to reach the stage of adult growth. This is what experience in the West has shown. Even in cities which have had compulsory education and a well-conducted library system for nearly 75 years, the percentage of the population which has begun to use public libraries has not yet reached 30. Assuming that 30 per cent of a community will always be unfit to use a library on account of age or other handicaps, it can be seen that 40 per cent more who can use the library are still staying out. This shows that the libraries of those cities have not yet reached the adult-stage of growth in respect of the number of readers. The situation is much worse with rural library systems. Thus, most of the libraries of to-day are in the phase of child-growth. This has many implications.

753 Library Building

The number of readers must be expected to go on growing steadily though slowly. The volumes in stock also must, therefore, be made to grow, in a corresponding manner, both in number and variety of subject matter. The staff too will have to be increased to keep pace with the increase in readers and stock. The expected growth in the three members of the trinity forming a library must be borne in mind in the design of the library building. When you build a house for your children,

you don't get its height and size determined by the stature of the infants. You build them as they would require them when they would be grown up and obliged to live with their own family and friends. In designing a library building too, the requirements of the adult stage must be borne in mind. The lay-out at least must be made accordingly; it may be programmed to complete the building in instalments at intervals. Overlooking this implication of the Fifth Law of Library Science has led to such wastage in the past, caused by the necessity to abandon a library building which has either no space for horizontal expansion or does not have a foundation strong enough to allow vertical growth. Even in cases where these two handicaps do not exist, the shape of the rooms or of the building as a whole is too symmetrical—say circular—to admit of expansion without avoidable increase in the overhead charges of administration. The changes in the notion of the building requirements of the Madras University Library form an illustration. In 1912, a room 50' x 30' was believed to be the maximum requirement. By 1918, treble this space was contemplated. The plan of 1924 provided for six times the space. In 1928, I insisted on 20 times the space on the ground that the library, which then had only 40,000 volumes, would grow to 2,00,000 volumes in 30 years and that the number of daily visitors would increase twenty-fold. But for the paralysing effect of the World-War and the temporary withering of spirit caused by the inundation of politics, the building, though planned as liberally as I wished, would have by now been out-grown.

754 Formula for Strength of Staff

The effect of the Fifth Law on the staff-requirements of a library in the stage of pre-adult growth is seldom realised. It invariably leads to vexatious situations, if the staff has sufficient enthusiasm to make the library grow. The authorities seldom

realise how quickly the sanctioned staff is outnumbered. They complain of frequent applications for increase of staff and turn them down. Even with the best of effort, the inadequate staff is unable to render even half the service which they announce and aspire to render. Publicity brings in more readers than can be served and more books than can be organised. The result is complaint and disappointment from all quarters and ridicule and underwriting by a handful of cynics whose voice usually drowns the voice of others. I have seen this phenomenon recur in library after library in the East and the West alike. Till recently, I had taken this to be as providential and inexorable as earthquakes. Of late, however, I am able to see some light and think of averting this form of frustration of the growth of a young library and of the spirit of a hard working, enthusiastic, pioneering staff The means I recommend is that library authorities should once for all agree to a mathematical formula for the staff of a library in terms of the out-turn of work. Once this formula is accepted, alteration in the strength of the staff should become automatic and impersonal and there need not be recurring opportunity for the play of cynicism and—oh ! How glibly they ridicule saying "Staff, staff and always more staff" !! And how ignorantly they judge the work of a library and its staff!!! Here is the formula which I have worked out. It was given to a shrewd business magnate to see the human value of this formula and accept it for the first time as giving the correct approach to the problem of staff.

7541 Staff-Formula

The following formula will be of use to determine the staff of any library at any time on the basis of the actual turnover of work :

Formula 1 : Total Staff.

If S = Total strength of Staff

S_m = Strength of Ministerial Staff

S_p = Strength of Professional Staff

S_u = Strength of Unskilled Staff

N_a = Number of Volumes accessioned in a year

N_d = Number of Periodical Publications abstracted and indexed (Documented)

N_{gh} = Number of Gate-Hours per year (a gate-hour is one counter gate kept open for one hour)

N_h = Number of Hours the library is kept open in a day

N_m = Number of Rupees provided in the annual budget

N_p = Number of Periodical Publications taken

N_r = Number of Readers per day

N_s = Number of Seats for readers

N_v = Number of Volumes in the library

N_w = Number of Working Days in a year

$[X]$ = X, if X is an integer; or
= Integral Part of X, if X exceeds an integer by less than 0.25; or
= Integer next above X, if X exceeds an integer by 0.25 or more than 0.25

Then $S = S_m + S_p + S_u$

Where $S_m = \frac{1}{20{,}000} \left\{ N_m + 20{,}000 \left[\frac{N_s}{100} \right] \right\}$

$$S_p = \frac{1}{3{,}000}\left\{3N_a + 60N_d + 6N_p + 2N_{gh} + 2\left(N_h + 6\left[\frac{N_r}{50}\right]\right)\right\}$$

$$S_u = \frac{1}{20{,}000}\left\{10{,}000\left(S_m + S_p\right) + N_v\right\}$$

Formula 2 : Distribution of work among professional staff.

If

S_c = Number of Circulation Staff

S_l = Number of Supervisory Staff (Librarian and his deputies)

S_o = Number of Other Technical Staff

S_r = Number of Reference Staff

Then

$$S_c = \frac{N_{gh}}{1{,}500}$$

$$S_l = \frac{N_h \times N_w}{1{,}500}$$

$$S_o = \frac{N_a + 20N_d + 2N_p}{1{,}000}$$

$$S_r = \frac{\left[\frac{N_r}{50}\right]N_w}{250}$$

Formula 3 : Distribution of work among Other Technical Staff.

If

S_b = Number of Book Section Staff

S_{cc} = Number of Classifying and Cataloguing Staff

S_p = Number of Periodical Section Staff

S_s = Number of Shelf Section Staff

Then $S_b = \frac{N_a}{6{,}000}$

$S_{cc} = \frac{N_a + 40N_d}{2{,}000}$

$S_p = \frac{N_p}{5{,}00}$

$S_s = \frac{N_a}{3{,}000}$

When a library reaches the stage of adult-growth, growth will consist of replacement of old readers by new ones, worn-out books by fresh ones and retired staff by new ones. In this stage, the library would have reached the ceiling for the number of readers, books and staff. Yet, there can be no relaxation in the publicity work since new readers must be secured in the place of older ones and there will be no less work in book-purchase or shelf-section work as the older volumes will have to be weeded out. But there will not be any necessity to extend the library building. Libraries of schools, colleges and business houses will soon reach this stage. As already stated, public libraries may take several decades and perhaps more than a century, though branch libraries in the divisions of a city and in towns belonging to a rural library system may reach the adult-stage of growth a little earlier.

A National Central Library can have no limit for the number of its volumes. It will be ever in the child-stage of growth. The design of its building will have to take note of this.

There will have to be five stack-towers, each of 2 tiers underground and 5 above ground and therefore 54 ft. above ground, 400 ft. long and 35 ft. broad for the National Central Library. It will also be necessary to have a dormitory outside the city to house the over-flow volumes and particularly the bound volumes of news-papers and a safe-vault library to house unique books in times of emergency.

LECTURE 8

Scope for Pursuit of Library Science

81 Three Factors

The pursuit of a Science depends on several factors: (1) Its own content challenging curiosity and luring competent persons into its pursuit; (2) Appearance of persons who are charged with *Prema* or divine curiosity, as Einstein called it, to dive into its depths for the pure joy or *Pramoda* of discovery; and (3) availability of a number of persons engaged in a systematic exploration of its capacity for social betterment and society, therefore, maintaining a group of persons for its pursuit into further depths. The history of every science has not yet been written in this dynamic form. It has been written so far in a statical or descriptive or chronicling manner. We have now enough historical books of the latter kind to form the basis for historical books of the former kind being attempted. I trust that the prescription of History of Sciences as one of the subjects of study in this University in India and in some Universities in other lands will soon lead to the writing of history in the former manner. In the meantime, I shall try to illustrate the play of the three factors inducing the pursuit of a science by a few examples.

811 Example of Mathematics

Let me begin with the primary tool-science—Mathematics. Of this science, it can be truly said, "Ever new, Ever becoming." Its contents are virtually inexhaustible. It has been steadily offering, from the beginning of man right up to this moment, new and unthought of regions of its own for exploration and

discovery. It began with the domain of integers and this domain still continues to be virgin soil. Extension of number-concept to the rational domain began very early; its successive extension to irrational, negative, transcendental, imaginary and infinite domains is well-known; and even to-day its extension to hypercomplex domains and its joining hands with the recently formed branch of Topology to explore number-spaces of endless variety, assure us of its inexhaustible contents challenging pursuit. So it is with algebraic form and geometrical patterns. The latter challenged human curiosity even in prehistoric times and still continue to be inexhaustible. Infinitesimal analysis, function-theory and special functions form another endless chain. Several new forms of analysis like Functional, Statistical and Tensor analysis have made their appearance in our own life time. Nor has there been any failure in the appearance of men from time to time to pick up the challenge of mathematics and grapple with it for pure joy. What mundane motive can be attributed to Newton and Waring who spent years in unravelling the mysteries of the cubic and quartic curves and showing to the world that there can be 72 species of cubic curves and no more, and 84,551 species of quartic curves and no more. The quintic, the sextic and other curves are still there as a standing challenge to humanity to throw forth other persons to pursue their study in an equally exhaustive way for the pure joy of it. Again what mundane motive can be found for our own Ramanujan of our own days having pursued the mysteries of Highly Composite Numbers, Partition of Numbers, Continued Fractions, Magic Squares, and Fractional Differentiation in his own unknown privacy, long before his discovery by the world and his exploration of the secrets of integers and Mock-Theta Functions even at the moment when Death prematurely threw His rope around him ?

812 Its Enrichment of other Subjects

Mathematics came to be recognised very soon as a tool-subject. The prior cultivation of it is necessary to make many of the so-called utility subjects yield their best help to human betterment. Society has, therefore, found wisdom in providing for its pursuit without looking for immediate return at the level of gross utility. But even though born of mathematics, Statistical Analysis could not easily get the benefit of its good-will and induce humanity to spare men and money for its pursuit. This recalcitrance was witnessed but fifty years ago. Karl Pearson had been lured by the unbounded vista of this new branch of mathematics. He had the capacity to explore it. But look at the human motive which he had to tap to provide for its pursuit. The drapers of London began to face a difficulty when the practice of stocking ready-made clothes came into vogue. Some sizes were often under-stocked and others were overstocked and both these led to loss. When the drapers were in despair, he offered a satistical solution which restored them to a flourishing state. The Drapers' Company, therefore, provided the means for the pursuit of Satistical Analysis and Karl Pearson went to the extent of propitiating their vanity by christening his series of publications "Drapers Company Research Memoirs." The persistence of Pearson and the repose of confidence in him by the Drapers' Company has revealed the unending scope of Statistical Science. It was successively applied to biology, agriculture, medicine, psychology, education, economics and sociology; and several new sciences have been born, as a result, during the last few years: Biometry, Agronomy, Psychometry, Econometry, Anthropometry, Sociometry and so on. Provision has now come to be made for the pursuit of all these sciences without any bargaining for immediate return and without asking them to establish themselves first. Some of these subjects have

even induced the floating of periodicals exclusively devoted to their pursuit. The unsparing faith in Karl Pearson and in the scope of a newborn science evinced by the drapers has thus redeemed many subjects. Economics, for example, which was getting drowned in conflicting verbiage and speculative speciousness, has now been rescued and put on proper rails. How suicidal would it not have been to economics itself if the Drapers Company had been led by the doubting economists of the day or if Statistical Analysis had been told by the other sciences, "You are a new-comer; you are, therefore, suspect; you must wait in the outskirts and perform penance for a few years to convince us of your worth" !

813 Provision without Bargain

The history of every branch of Physics offers plenty of materials to illustrate the play of the three factors in the development of a science; and so it is with Chemistry. Centuries of demonstration that the world usually lags behind the surge of contemporary thought in a science have at last begun to lead some sections of humanity to provide occasionally men, money and opportunity for the pursuit of a science without bargaining, without suspicion or misgiving of anykind and without succumbing to the false alarm raised by votaries of previously established sciences that the new science is a pretender, will bring disrepute to a university or will lead to a fiasco, or the specious warning of such people that the new science should not be recognised or provided for or admitted to full status until it proves its case without any of the aids, the patronage and the entrenchment behind which some of the older sciences back. The Tata Institute of Fundamental Sceinces and the Tata Institute for Social Work are noble examples of sciences being provided for without bargain. There is no doubt that the benefit which humanity will derive ultimately from the work done under the auspices of

these Institutes will throw into insignificance any immediate return or previous demonstration which a bargaining or sceptical obstruction would have brought forth. The Carnegie benefactions for the pursuit of several new sciences, not readily recognised or provided for by universities, have demonstrated during the last quarter of a century how much humanity stands to gain by the ungrudging and unhalting admission of new disciplines to the status of science and the throwing open to them of all the prestige and the facilities available without any reserve. Shrewd business magnates sense the capacity of new sciences to admit pursuit more readily than even universities. Universities should correct their attitude in this matter.

814 Psychology of Research

Perhaps the most recent and outstanding provision for the pursuit of science without any touch of bargaining or sceptical spirit is the Institution for Advance Study which was founded in 1930 with a School of Mathematics and was later extended successively to include Schools of Economics, Politics, Archoeology and Humanities. The Institution was conceived and endowed with 7 crores of rupees by Louis Bamberger, the owner of a departmental store in Newark, and his sister Felix Fuld. It has no laboratories, no workshops and not even rooms for formal lectures. But it has an excellent library, 100 men and women from 12 countries live in it and think together—a most imposing collection of minds ever gathered in one place. It is an institution designed for thinkers who have no concern for immediate practical results. The Mathematical School, for example, has become a sanctuary for many of the famous names known to every mathematician but which means very little to the outside world. They are all maintained free of duties. Our own Ramanujan himself was appointed a Fellow of Trinity College free of duties of any kind. And yet what an amount of work they all do in their

subject ! So it is with all engaged in the pursuit of any science. They often fall into that curious state of excitement during which nothing in life seems important but the problem on which they are working. The whole world becomes unreal and all their thoughts spin madly around the subject of research. To the outsider they may look like idle creatures maintained without purpose; they alone know the exacting nature of the task they perform. They may seem ridiculous when they fill sheets of paper and use a strange language composed of words understandable only to the initiated. They enjoy long talks which would seem to an outsider a torture hard to endure. There is a level below which their talks seldom sink. They seek isolation. They are not fighters; they care little for power; no one who has tasted research would exchange it for power. No great political leader has, therefore, ever arisen from the circle of those who pursue science. Did Vidyaranya accept the offer of Premiership ? Scientists refuse even Vice-chancellorship. Those who have tasted science more sumptuously decline to attend even meetings of Academic Bodies. As I look into the future of this Department of Library Science, I see young men attracted to it from year to year. Out of these, I see a few whose eyes gleam with that joy which I can recognise as the one born out of the pursuit of science. I see further that a few of these few are seeking isolation, withdrawing from limelight though it is thrown by scientific reputation and forgetting all else in their pursuit of Library Science. I see that the laboratory in Library Science has shifted to India. Such is my faith about the second factor determining the scope for research in Library Science *viz* appearance of persons who are moved by *Prema* to dive into its depths for the pure *Pramoda* of discovery.

82 Contents of Library Science

What about the contents of that science ? What about its capacity to challenge curiosity ? Is there enough in it to lure

competent persons into its pursuit ? I referred in the sixth lecture to the initial lack of faith I and others had even in the possibility of work in a library gripping a person with active habits. I told you how I soon found almost virgin soil to cultivate. Let me say something more of my experience, which will go some way in answering the questions just now raised. By the time I returned home in 1925, I had been converted to the view that a Library Science did exist. I told you in the seventh lecture what the Laws of the Science were. In 1928, *i.e.* shortly after their formulation, an opportunity presented itself to expound them to a large audience of about 500 teachers. The South India Teachers' Union held its Annual Conference at Chidambaran. At the request of that Union, the University of Madras appointed me to deliver a course of University lectures before the members of the Conference. I chose the Laws of Library Science for the subject. I enunciated each of the Laws and worked out the inferences. These lectures were systematised during the next two years and the result was published in 1931 as the *Five laws of library science*. But, for some time after this book came out, I had a feeling that all that can be got out of the Laws had been exhausted. This sense of bankruptcy was very humiliating. How was I to justify the grandiloquent appellation "Science" ! Was I to become sterile in thought and writing ? Was the note of scepticism struck by Sir P.S. Sivaswamy Ayyar a real warning? Was I to abandon this new field of knowledge and run back to mathematics, which was my old field ? Such misgivings persisted for about a year. During that period, I was feeling that the subject had no depth and did not offer adequate scope for any further pursuit.

821 Gleam of Reassurance

But a gleam of reassurance came when the potency of the Laws disclosed itself in my conferences with the architect en-

gaged in designing the new libarary buildings. Whenever moot points turned up, they were easily settled by an appeal to the Five Laws. They gave light not only to me but also to the architect. Many of the problems were quickly and impersonally solved by deduction from the Laws—very much like what we experience in physics or chemistry. Even at the stage when questions went up to the Committee of the University Executive, those that had an open mind and a scientific attitude appreciated the decision recommended whenever they were shown as deductions from the fundamental laws. Of course, there were a few—who had political or personal axe to grind, whose *Dharma* was to oppose and to disown the validity of the very laws and who would sacrifice truth and the good of the library to a low passion. Barring these, work with persons in a normal state of mind and interest was made quite easy by the Laws. Incidentally this experience made me regain some confidence.

822 Confirmation of Confidence

Then came the race between increase of work and increase of staff. The need for a manual of administration arose. It was in framing the detailed rules of this manual that I saw the tremendous power of the Laws; it was then that I could sense their unfathomable depth. When my *Library administration* was published in 1935, the fact that all its rules should have flown from some fundamental Laws was sensed by one shrewd reviewer in the *Madras mail*. He later disclosed his identity to me. He was a senior Scottish member of the Indian Civil Service. He wrote in the review, "It is not difficult to appreciate the fact that Mr. Ranganathan has here devised a simple but powerful method of constructive analysis which will leave no corner of a subject unexplored." While the ease with which it was possible for such a book of details to be written had restored in me confidence to some extent in the capacity of the Laws of Library Science, and

therefore, of Library Science itself to lure one for ever into its pursuit, the above observation of the reviewer confirmed that confidence.

823 Experience of Depth and Potency

Concurrently with the *Library administration*, the first editions of the *Colon classification* and the *Classified catalogue code* were being forged. Work on these basic books began to disclose the depth and the potency of the science in an ever-increasing measure. The opportunities to deliver some lectures at the University of Bombay to adult students who were being brought up along different lines turned out to be opportunities to dive deeper into the Science and sense its unending depth.

824 The Vision of the University of Delhi

As I grow in age and as I quarry from greater and greater depths, I stand amazed and overwhelmed. The sense of bankruptcy which overwhelmed me seventeen years ago and made me afraid that I had already come to the end of my tether has now given place to another sense which overwhelms me even more than at the beginning and makes me feel that I may be reborn many lives (God forbid) ! on this earth, may devote them exclusively to the pursuit of Library Science and yet may not reach down to the fullest depths of Library Science. As I would rather prefer to be left without rebirth, I wish to see young persons enrolled for a research degree in Library Science, as many can jointly explore it to a greater depth than a single individual. It is my having experienced this that emboldened me to appeal to three Universities to open a department of Library Science, enrol promising young persons for initiation into the subject in a two-year degree course. Delhi alone had the vision to respond. You can now understand why I express my gratefulness to the University of Delhi so often.

83 Example of the United States

You can also understand why I am pressing the provision for research in Library Science for immediate attention. I am eager to share with gifted young men the joy of digging further into the never-ending layers of this subject during the few years still vouchsafed for me. I trust that some of you and your successors will deem it worth while to give up pursuit of power, or careering of one sort or another or the limelight that goes with them and give yourself up to the pursuit of Library Science. In the United States nearly fifty young persons have already taken their Doctorate in Library Science and more are coming forward. That country is turning so many of its young citizens on to this Science, not because it has a superfluity of men, but because it is convinced that, in a modern democracy, research in Library Science is necessary for social betterment. Why is it necessary ? This is a fundamental question. We must go into this fully. Let us begin at the rock-bottom.

84 Necessary for Social Betterment

Persistent pursuit of Library Science at great depths is necessary to develop library movement along fruitful lines. Why library movement ? Because it is necessary for social betterment. Why again ? To see why it is necessary, we must understand what library movement is. Library movement is not the setting up of isolated libraries, big or small, primarily for collecting, assembling and preserving printed materials. It is setting up and keeping in an effective state of action an integrated net work of libraries—a library meaning an institution maintained for and by the community primarily for the social purpose of providing easy opportunity for the self-education, throughout life, of every person of the community through the medium of thought preserved in printed books—organised, served and administered with discrimination by persons who are adepts in helping

the retransformation of thought locked up in a static, material state into one in a dynamic, mental state. A library is thus a substation where thought-energy packed in portable books is unpacked and released either to fill the mind with or to amplify and add to the thought-energy of the world. In the present state of human evolution, social betterment can not be achieved merely by vital energy or emotional energy. Thought-energy is essential. Spiritual energy, which will be omnipotent, is not yet easily produced. Indeed the production of the necessary vital energy has itself to use thought-energy; the rectification of emotional energy has to be done with the help of thought-energy, and even the preparation to absorb spiritual energy as and when it becomes available has to be by means of thought-energy.

841 Betterment of Personality

This is all too heavy a packing of ideas. I see the look of puzzle in your faces. Let me try to lighten it. Let me begin with the individual, rather than with society. After all, social betterment has to begin with individual betterment. The betterment of an individual has to be in all the three facets of his personality—the vital, the mental and the spiritual ; these are in decreasing order of grossness and increasing order of intangibility —the body, the mind and the soul. There is a latent urge in each of these facets to grow and unfold to its fullest possible stature. The urge in the body-facet manifests itself easily and very early ; the microscopic gene in the cell is irrepressiby dynamic ; bodily growth is so irrepressible and involuntary that it looks as if it were all a case of biochemistry. The urge in the mind facet is slower in manifesting itself ; it is not mere manipulation at the biochemical level ; in the case of most people, it needs stimulation by thought which is the product of other minds. The urge in the spiritual facet is much more lethargic in most

humans at the present stage of evolution; those in whom it manifests itself are few and far between—Buddha, Sankara, Christ, Muhammad, Sambandha, Basava and Ramkrishna do not appear even at intervals of a century. Even spiritual lights of lesser magnitude do not appear so frequently. In all else, the urge in the spiritual facet does not even lead to an occasional fleeting of glimmer; at best, it just shows its existence by helping the drawing of an ethical or moral sense coloured though it be by conventions, with the result that 'ethical' or 'moral' is mistaken to exhaust 'spiritual' and mistaken too as its equivalent. You will find an instance of it, for example, in the speech with which the Archbishop of Canterbury pressed his resolution in the House of Lords for the provision of spiritual education as the only cure for the warring urge in humanity. Please look up the *Debate in the House of Lords* (1942) for this speech.

842 Vital Role of Mental Growth

Let me present these three facets of human personality from a slightly different angle. In the vital level, man needs for his growth and happiness food, shelter and clothing, and so it is for society. When population was sparse, these were got easily. But now the pressure of population has increased beyond the limit in which the traditional rule-of-thumb methods would be sufficient. To make the earth and the water yield the necessary food, agriculture has to be intensified by technical processes. The building materials found in a natural state have to be added to by technology. Cloth and clothing have to be produced on a vast scale, which also require the service of technology. The technical processes involved in all these stand in need of constant improvement to fill up the ever-increasing gap between nature's direct bounty and the needs of society. Large-scale production with the aid of technology has called for division of labour on a colossal scale. In these circumstances, managerial work itself

has transcended the capacity of mere flair and has become scientific and technical. Thus growth in the vital level is dependent on growth in the mental level—unprecedented enrichment of the memory of one and all by the absorption of ever-shifting information and the cultivation of intellect of a much larger number than hithertofore to the point of creative ability. Thus the attainment of the happiness (*Sukha*) derivable from unimpeded development in the vital facet of personality demands as a help that the mental facet too should develop apart from its own intrinsic need for growth to lead to the joy or (*Pramoda*) of knowing and creative thinking. The growth in the spiritual facet, from which alone delight (*Ananda*) will come is not derivable from mere vital or mental growth. But what tradition has handed down to us about personalities like Buddha, Sankara, Jesus, Muhammad, Sambandha, Basava and Ramakrishna and from what we observe in awakened contemporary souls like Anandamayi, Aurobindo, Oliyullah, Ramanarishi and Swayamprakasa, we are led to believe that when there is active growth in the spiritual facet, growth in the vital and mental facets follow as concomitants.

834 Master-Switch

Let me next put these ideas in electrical terms. There is a switch in all the three facets of personality. These switches have to be turned on to maintain growth in the respective facets. The switch in the spiritual facet is an over-all master-switch. If it is turned on, the switches in the other facets too are automatically turned on. The turning of the switch in the vital facet alone is sufficient for the vital growth of plants and animals—which is all their growth. But in the case of man whose growth means growth in the vital and the mental facets at least, the turning of the switch in the mental facet is doubly necessary, as the turning of the switch in the vital facet alone

fails to sustain the desired results unless the switch in the mental facet also is turned. The switch in the mental facet is a main-switch. This switch can be operated only by ideas. This means that man's physical and mental growth and the consequent happiness and joy have to be stimulated with the aid of thought-energy. Social betterment can be secured only by stimulating one and all by thought-energy. Let me restate the idea in another way. Social betterment in a democracy is possible only if we set about in the right way. To envisage the right way, we must begin by recognising a fundamental feature of the present stage of human development. A group of human beings ought to show in an integrated social form, the development of the personality of each individual who constitutes it. But this should be attained, not in a regimented mechanical way that ignores or tends to obliterate the purposeful 'scatter' of interest and capacity with which Nature has in her wisdom endowed humanity, but in a way that recognises the 'individuating particularities' of one and all, so interlacing them as to make the unfoldment of the distinictive personality of each help that of every other. In the ultimate stage, each person has to grow himself. So it is with all living organisms, beginning with the very plants. The gardener does not really 'grow a tree', he can only help it with sunlight, manure, water, fence and shade It is the tree's own vitality that has to grow it. In the case of man, it is a little more complicated. His personality has three facets—the vital, the mental and the spiritual. There is a switch, so to speak, at each of these levels, with a main-switch in the mental facet (which controls both vital and mental development) and a master-switch in the spiritual facet (which controls the development of the whole man, including the spiritual.) The science of this master-switch and the art of operating it is known to few. The adepts—the *Rishis* of Indian tradition and even the

Urthmen of Townshend—are but a handful. Thus in the present stage of human development it is only the main-switch in the mental facet that is accessible to most men. The fact that it is accessible should be fully exploited.

844 Technique of Betterment

Providing so-called 'improved' standards of living is necessary but not sufficient. It has now been nearly understood that past attempts to polarise communities and nations into the few that provide and the many that consume (thus reducing the many to the status of cattle) harm in the end even the few. Working the switch in the vital facet alone is indeed worse than making beasts and plants of men, for the innate mental current which develops in them by slow degrees eventually collects enough strength to burn out indiscriminately all that is of permanent value, in its attempt to break through the powerful insulators built by religion, aristocracy, imperialism and capitalism. It is now generally recognised that the only harmonious and enduring way is to turn on the main-switch in the mental facet of each person without exception, so that the work of the switch in the vital facet too may depend on it.

In other words, all human progress has to stem from ideas. It is futile to attempt progress by lifting the people at the vital level alone or by spoon-feeding. History shows that the sure way is to generate and diffuse the idea of progress—provide a light to guide, not a mechanical escalator to carry the body. It is the supply of thought-energy that is wanted. In its supply, the help from the immediate presence of the master can be supplemented by thought abstracted and packed in the form of books. Very often, in fact, books will be the only form of help available; for, a community attempting to turn on the main-switch in the mental facet of one and all can not find at the present stage of human evolution, enough masters to go

round. Moreover, as an aid to acquiring skill in manual work, industrial processes, and the various arts and crafts, and in setting up and working political, economical and educational systems, or for delving into hitherto unexplored depths of knowledge, the spoken word is too fleeting. It must be recorded in sound-films or books so that ears and eyes may return to it repeatedly. Humanity has not yet devised any other way of meeting this need of the mind. The technique for social betterment has, therefore, to include production of books on all current phases of knowledge and at all levels of thought, the floating of periodicals, too, for rapid dissemination of thought and the production of sound-films. It should also include the maintenance of a nation-wide library service to organise and display this 'materialised' thought, with expert librarians to distribute it expeditiously to every citizen in an intimate and personal way, to the measure of his needs from time to time. There is, therefore, need for the continuous stepping up of the capacity of the library profession. To step up their capacity, it is necessary to give a Degree Course in Library Science and turn an appreciable number of able, young citizens on to research in that subject. Inducements like the institution of a Doctorate Degree in Library Science, providing as many facilities for research in this new subject as for other subjects, should also be offered.

85 Cosmic Economy

The whole purpose of providing various special subjects in the degree course is, from one point of view, to meet the diversified needs of society. This also respects at the same time the specificity of the educability-make-up of individuals. Cosmic economy is indeed such that the frequency distribution of the educational specificity among the members of a normal national group answers exactly the diverse needs of the nation. The ills of a nation are often traceable to its failure in

putting the right person on the right job. Apart from the internal and external factors contributing to it, a pre-form of this failure is the absence of provision in its educational system to sharpen the native aptitudes of individuals in all their diversified forms. National economy and efficiency demand that the universities should provide opportunity for the potential librarian to unfold himself to his very best.

851 Division of Labour

During the last two centuries, the division of the field of knowledge among research workers has been carried to a nicety—almost to atomisation. This has no doubt produced very good results of a kind. But it looks as if knowledge is turning round to have a revenge. It challenges man to deal with unthought of cross-sections of itself and new combinations and permutations. This is quite apart from what has been felt all along: that a narrow field pulled up as a unit for cultivation clings with its tentacles round so many others that it cannot safely be dealt with in isolation. These factors point to the need for division of labour of another kind to make the research organization of any nation and of the world as a whole more efficient. There is need for compensation by the creation of a new class of specialists who can comprehend a larger range than those who are digging intensively at particular points. The former must feed the latter with pre-digested and well-featured information on all allied points. The man in the library should be taken as a partner in the pursuit of any problem. It is not yet understood how much relevant information, otherwise left unnoticed, can be revealed in a remarkably short time by a man who specialises all his life in Library Science. The time has come for implementing the new division of labour envisaged here; and its implementing demands that Library Science should be

given a place co-ordinate with the other subjects in the degree course. This would lead progressively to greater economy in the intellectual work of the nation and of the world at large.

852 Research Degrees

All these considerations go to prove not only the need for a primary degree course in Library Science but also for a post-graduate degree course in that subject. This is necessary to keep the torch of Library Science growing and aglow. This is possible even now. Our own books on classification, cataloguing, administration and bibliography have isolated topics which need further investigation and will lend themselves as fields for probing by aspirants for research and degrees. For example in referring to the *Prolegomena to library science* (1937, Madras Library Association, publication series, 6), the *Library quarterly* of Chicago recorded that "In some post-graduate course a degree might well be earned by a reconstructive study of these canons". There is, therefore, need in our universities for a Department of Library Science with a full-timed Professor at its head to do research work himself and to guide students working for doctorate.

853 Value to Pedestrians

The pursuit of Library Science at such great depths by university men will be necessary for sharpening library practices of all kinds so that the libraries of the land may function up and make their fullest possible contribution to the maintenance of the nation at a high level of life. The development of such a research atmosphere will also be necessary to tone up the lower courses for library training and to lift to progressively high levels the standard of the pedestrians in the army of 100,000 professionals that will eventually stand enlisted to the library cause.

854 Value to the Nation

Such a highly tuned professional standard will become essential as the National Library system reaches the lowest quartiles of the nation. The need for it is not felt at present since those, who now use the library, do not belong even to the entire first quartile, not even to the entire first centile but are the very pick even among them. These are always self-helpers. But the National Library System outlined here envisages the extenstion of service down to the very last centile. Most of these will fail to derive the benefit of the libraries unless they are served with individual attention and with the aid of a specially and highly evolved technique. Asking for provision for rereach in Library Science as part of the scheme for the National Library System can thus be seen to be not a mere professional indulgence but an un-mistakeable necessity.

86 The Case for Library Science

If the United States of America has instituted Degree and Doctorate courses in Library Science, and is turning so many of its young citizens on to this Science, and is sparing a slice of its finance to provide for the development of this Science, it is because it has realised the value of the subject to individuals as well as to the community. Thus the scope for the pursuit of Library Science is established by all the three factors considered *viz.*

(1) its content challenging curiosity and luring competent persons into its pursuit;

(2) appearance of persons who are charged with *Prema* or divine curiosity to dive into its depths for the pure joy of discovery; and

(3) society realising the need to maintain a group of persons for its pursuit in order to secure social betterment.

LECTURE 9

Urgency for the Pursuit of Library Science

91 Due to Independent Status of India

In the last lecture, I showed that Library Science offers sufficient scope for pursuit at the university level *i. e.* through degree course, post-graduate research course leading to a doctorate and life-long research by some. I should like to devote this lecture to show the urgency for its pursuit in India to-day. I propose to establish in three different ways that we are in urgent need of provision for its pursuit at all levels-under-graduate, post-graduate and faculty of research. I should like to do so as there are some who imagine that those who talk of Library Scince in India to-day walk with their heads in the clouds. In reality it is they that walk with thier thought fixed on the exalted tenth of the community, whom nature has endowed with a high. I. Q, and the last two hundred years of foreign rule and medium (of intercourse at levels higher than the vegetative one) had given a preferential treatment which has made them oblivious of the needs of the remaining submerged ninetenths.

911 Mahatma Gandhi's Service

During the last two-hundred years, the exalted tenth of the Indian community which should have borne the burden of feeding, clothing, housing, educating and enlivening the rest had been a protected lot—so well relieved of their rightful burden of keeping India abreast of the world that they have all lost the power of initiative, of creative work and of caring for others. To regain the power of initiative and creative work,

they must first learn to care for the rest of the nation. Mahatma Gandhi was the first to sense this. He sensed it so strongly that he made his own body a symbol and a constant reminder of the submerged nine-tenths—nay of the over-submerged tenth in the bottom-most social strata. His half-naked body dressed in loin-cloth, travelling in crowded third class compartments and living amidst Harijans should not be taken as the indulgence of a crank. It was part of the met .od of an astute adept to reclaim the exalted, but spoiled, tenth. His symbolic mode of life made the hither-to over-looked masses a power to count. This addition to the nation's power has proved sufficient to snap the fetters of the nation. With the fetters, disappeared also the hand which was protecting the exalted tenth to the point of inducing atrophy of sensibility. Initiative has now become an urgent necessity, the responsibility to feed, clothe, house, educate and elevate one and all of the citizens has become our own; this demands creative work in all spheres of thought and life. It is only after gaining independence that we realise that independence is only a means and not the ultimate end, and that independence has brought in its train a great responsibility.

912 A Message of his Martyrdom

The first demostration that independence made was of the tragic consequences of keeping nine-tenths of the nation two hundred years behind the world, giving no intellectual exercise or feed to the mind and leaving it no alternative but that of feeding on passion. Passion. is strong emotion. It is only the cultivated intellect that can discriminate between benevolent and malevolent passion. With the intellect crippled for two centuries, India had to depend solely on her emotions to break her claims. All the energy that had shaped her in recent years had to spring from good emotions—the dynamic power of racial pride, leader-worship and faith. The common

external objective of winning independence kept the passion of the masses on the side of these higher types of emotion. When it blew out its target, the passion itself was kicked back into the wrong side; the recoil took the passion of the masses to the side of the lower types of emotion. Here again the personality of Mahatma Gandhi, the reputation he had established all along for caring for the submerged and the symbolic make-up of his body, were able to act as a buffer and push back the passion of the masses into the right side.

But alas, even this buffer has now been smashed down by the very evil passion which he was engaged in exorcising. This confirms the danger of depending on mere passion—passion uncontrolled by cultivated intellect and conation fed by such intellect—for the steady and enduring betterment of society. In exposing and submitting his body to assasination promoted by passion, Mahatma Gandhi has brought home, as it were, to the mind of all concerned that the building up of independent India should hereafter depend less on emotional energy and more and more on intellectual energy. This extreme form of shock-therapy, as shocking as the exile of Sita and as the submission of Christ to the cross, had been intended to cleanse the emotion of the nation and prepare it to substitute in the place of the impulsive force of passion the steady and continuous, though slow, force of the intellect. This is a message of his martyrdom.

913 Means to Mental Growth

The induction of emotional energy especially at the level of group psychology—needs more of nascent, impromptu spoken words than of cold, deliberate ones. The potential has to be stepped up quickly and turbulently by the living voice, the powerful eyes and the changing expression—in short, by the incalculable influence of a powerful personality in direct and immediate

contact. But to step up the so-called dry intellectual energy, the help from the immediate presence of the master may be necessary but will not be sufficient. It will not be sufficient in the sense that no democratic community, attempting to turn on the main-switch in the mental facet of one and all of its members, can find (at any rate, in the present stage of human evolution) enough masters to go round. Moreover, it is only the master-switch in the spiritual facet that needs to be turned on once and can achieve perpetually, thereafter, all which is desired. It is not so with the switch in the mental facet. It will have to be turned on again and again. As I said in the last lecture, to acquire skill in manual work, industrial processes and the various arts and crafts, and in setting up and working political, economic and educational systems or for delving into hitherto unexplored depths of knowledge, the spoken word is too fleeting. It must be recorded in sound-films or books so that ears and eyes may return to it repeatedly. Humanity has not yet devised any other way of meeting this need of the mind. Books will have to be used. India's next step in her onward march—her effective use of her independece should be based to a considerable extent on the production and effective distribution through library service of books on all current phases of knowledge. It is a matter of grave concern that none of the three plans formulated before the turning point—the Nehru Plan, the Bombay Plan and the People's Plan—gave such priority to library service and education. Even the Sargeant Plan which turned on education missed the essence and spent itself out before it had elaborated the organisation needed for the continual self-education of every adult. My own *Post-war reconstruction of libraries in India* (1944), *National library system, a plan for India* (1946) and *Library development plan, with a draft library bill for Bombay* (1947) were brief attempts to fill up the gaps in these plans. The needful

organisation elaborated in my plans is the establishment of net-work of libraries of all the varieties I described in the third lecture. How can such a net-work of libraries be established on right lines or worked profitably unless they are manned by a competent band of librarians ? How can such a band of librarians be produced unless the Government wills it and the Universities train them properly ? And how can the training of the profession and its competence to improve its technique be adequate unless the leaders among them are trained in research in Library Science and those that show the necessary aptitude are helped to turn their main thought and work on research ? This shows that if it is granted that India should use her independence for the up-lift of the masses, pursuit of Library Science is urgent. It can not be delayed. It should not be advised to " hasten slowly". Any such advice, any such obstruction, is an anachronism which is deplorable if not criminal.

92 Means to Make up for Past Stagnation

The urgency for the pursuit of Library Science can be seen also from another angle. To put it quite simply: Here is a nation of 40 crores of people with a heritage which no other nation can claim to possess. A few centuries ago, exhaustion overtook it. It went into a stage of coma. It was over-powered by others. This worsened its sensibility. During these few centuries, the world has accelerated in all fields of knowledge, leaving it far, far behind. The world has also been shrunk by the result of scientific advance and it has also been closely knit up by economic ties. Now this nation has shaken off its coma. It opens its eyes, looks round and feels bewildered.

"The world has become very different", it says, "They are all so far ahead of me. If I do not overtake them quickly, the pain of being dragged along is unbearable. I may even perish

by this dragging unless I move up to their stage quickly. They drag me so mercilessly as they have begun to realise that their previous practice of polarising the world of nations into the few that lead and exploit and the many that are led and exploited, harms ultimately both the poles alike. I should, therefore, run with all my might and fall in line with them in all fields of knowledge, in my equipping my citizens with the means of acquiring knowledge and extending its boundaries and in my giving equal opportunity to all to grow in body, mind and soul. Heaven knows how quickly this must be done. Since growth in all the facets has to stem from the mind, provision of an agency, for the perpetual further self-education of one and all has to be the first step. This means that the setting up of library movement and the development of nation-wide library service, have become ever so urgent. It is, therefore, too late now to develop it in a halting, casual, laissez-faire manner. I should not allow scepticism to make me ask Library Science to wait outside my door and produce evidence of its credentials or competence. It has established itself in all those countries that are ahead of me. It is that which is helping them to move forward so globally and so rapidly. No, no. It is no use promising Library Science recognition or admission into my universities some years later or even by degrees. I must allow it to step in immediately and go the whole hog immediately—from the Certificate Course of three months for the lowest ranks in the profession, through the Diploma Course for the more advanced workers, through the Degree Course for the still more advanced ranks, through the Doctorate Course for the leaders of the profession on to the establishment of chairs for those who devote their life-time to research in the subject--all this at once, not one after another. My statesman at the head of affairs, my universities, my public, I implore you to make a concerted effort. Begin immediately with the pursuit of Library Science. With its help, you must

jump several steps, so that you will jump ahead of countries whose development has been gradual". Enough has now been said to explain in outline the point of view of the library practitioner, scientist and philosopher. But those who belong to the exalted tenth of the nation do not easily get convinced. They had found themselves exalted without the help of Library Science or perhaps the help of any library service, even one unbacked by Library Science. Library Science, it would seem to them, is but a rush-light toyed with by one or two in the world, of little need for us in India. "Our plain duty is" they may argue, "to cut away through as best as we can, bold in the confidence of good intention and the belief that all honest effort would bring progress somehow; when so much money is wanted for so many things and for the pursuit of long-established sciences how can we sink any amount in libraries and above all in setting up a new discipline called Library Science." Or perhaps they are not so unconvinced. It may perhaps be granted that there is a vague and general feeling that the country should have a library system. But it is doubtful if either the public or the authorities are sufficiently informed about what constitutes useful library service or what should be expected of libraries. It can be asserted that there is absence of recognition either of the need for a specially trained library profession or of the urgency for the pursuit of Library Science in order to organise and fulfil the purpose of library service. Whether India covers in a much shorter time the distance other countries have already covered during the last few hundred years will depend largely on the place the attainment of nation-wide library service and, for this purpose, the provision for the pursuit of Library Science are given in the priority list of the programme of development. I wish that it does not become necessary to experience crashes in several ventures of development before realising the need for backing every programme of development—be it educational,

political, constitutional, economic, industrial, commercial or social—by an adequate and efficient library service and, for this purpose, the need for providing for the pursuit of Library Science from the very beginning.

93 To Produce the Necessary Library Man-Power

There is yet another way of proving the urgency for providing for the pursuit of Library Science at all levels. That is to consider the Library man-power needed by the country. Let us first consider the library man-power needed for the efficient working of the present industrial and political organisations, the vitalising of the existing educational institutions and the supply of reading materials as a public project for the recreation, information and inspiration of the adults who are literate to-day. To arrive at the minimum requirement, I shall assume that the libraries are to function only for six hours a day and are to be allowed weekly holidays and the normal number of other public holidays.

931 Business Libraries

9311 Industrial Libraries

Let us first consider the chief industries. Each industrial house should have a library on its industry, circulating the latest information among its operatives whether found in books or periodicals or pamphlets or leaflets. At present, most of them get on without library service as their work is largely repetitive of processes invented and improved in foreign countries, without adequate attempt at improvement or invention. This can be neither honourable nor effective in independent India. To keep improving the methods of production, there is need to stimulate the minds of the operatives by the circulation of thought-energy by competent library service rendered to the satisfaction of the Laws of Library Science.

Let me first take up the iron and steel industry. There are five principal manufacturers. These need five libraries. These libraries will require a professional staff of about 30. The 150 sugar factories will need 150 libraries of their own, with a National Sugar Library as a reservoir. These will require a professional staff of 320. There are 32 paper mills. Their libraries will need about 50 trained librarians. Cotton textile industry is an expanding one. There are 420 mills. Each of these must have a library of its own. It is economical to have a National Cotton Library at their apex. These will need about 1000 professional staff. So also, the libraries in 107 jute mills with the National Jute Library will have to be manned by 250 professionals. The 32 wollen mills will need about 60 librarians to work their libraries. The 57 cement factories may require about at least 57 librarians. The film industry need the service of library not only for its technical work but even to select and embellish themes.

The employees of a large film-producer in Madras used to draw help frequently from the Madras University Library, though its collection or organisation was not suited to serve the needs of film industry. Then there are mining, shipping and engineering industries and several minor industries like silk, matches and shellac. 2000 is a conservative estimate of the number of librarians needed to circulate thought-energy among those engaged at present in industries, as they can no longer depend on foreigners as hithertofore.

9312 Newspaper Office Libraries

There are at least 30 Newspapers in India which have a large editorial and managing staff. Their reliability and fullness of service can be improved considerably if they care for their library and draw help from professional librarians. They have

developed their reporting staff to an appreciable extent. But journalism is not merely reporting and editing of reports. Till now the political struggle against foreign yoke made journalism in India easy, as appeal to the emotions made up for lack of intellectual penetration. That is why the news-papers have not till now, paid attention to their libraries. In Independent India, journalism will be failing in its duty unless it becomes considerably more informative. That this is being realised is evidenced by the tendency to enlist the services of first rate university men to its services. These can function at a really high level only if they can find in the libraries of their offices men of equal ability capable of sharing the work with them by the organisation and supply of facts and figures exactly and expeditiously. I estimate that the major newspapers will require at least 100 librarians of a high order.

9315 Commercial Libraries

Then there are commercial, banking and transport-service concerns. Counting the major ones alone we have 24 Banks, 141 Insurance companies, 15 Railways and Tramway systems and 14 other transport systems, apart from Chambers of Commerce. Each of these categories must have at least one library to serve each province. Thus libraries of this kind will number about 100 in all India and will need about 300 librarians.

9318 Departmental Libraries

There is no business in the world to-day more exacting and extensive than the Government. There is hardly a field of knowledge which is without a Government Department. These Departments are now obliged to maintain a research wing in addition to the administrative wing. To serve either, each Department needs a good library. Some Departments like Agriculture, Forestry, Highways, Irrigation, Botanical, Zoological, Anthropo-

logical, Linguistic, Archaeological and Ordanace Surveys have to maintain libraries of the highest academic standards tuned to the needs of active research. They have in fact the best library collections of their kind in the land. Most of these may have to be maintained by the Central Government only and these will need a professional staff of about 100 librarians. Libraries intended to help administration *qua* administration will have to be maintained not only at the Centre but in all the Provinces as well. Even at the present comparatively low stage of evolution of the Departmental Libraries, the tone of administration can be considerably raised if professionally trained librarians are appointed in sufficient number to man them, not as record-clerks in the ministerial cadre, but as technical men of high ability both of a general and specialised nature. capable of anticipating the information needed by administration and collecting and presenting it in a properly digested form as by an equal to an equal. All the Governments in India taken together will require about 500 such librarians for the administrative departments, and about 100 for the libraries of the legislatures and 500 for the libraries of the judiciary. Thus the libraries of Government Departments will require about 12,00 librarians.

9319 Summary for Business Libraries

So much about the library man-power required for vitalising the commerce and industries and the Government Departments of to-day through business libraries of the right sort. The strength required is about 3,600.

932 Academic Libreries

Let me next show you the man-power required for the academic libraries. The 15 universities should need about 300 trained librarians to make their libraries function up and relieve the members of the teaching faculty of the labour of hunting

for information from a scratch. These librarians must go further and actively bring to the notice of each teacher all the nascent thought relevant to his field of study, which arrive in the library from the time in the form of periodicals and books. Similarly the librarians in the colleges should be sufficient in number and capacity to follow up the progress of teaching work in the different subjects and stimulate, keep up and satisfy the curiosity to find out, know and enjoy what has been published. The 455 colleges will need for this purpose a professional staff of 1500. If college libraries exist but fail to function, school libraries do not even exist. Till now our schools have hardly aimed to prepare the children for further self-education through books throughout their life. This failure on the part of the schools was not noticed as the products of the schools and colleges were used up mostly in ministerial work. Even of the few who were put in better places, hardly any creative work was expected. There was thus no scope for further self-education. The amount of national time and energy wasted by the failure of the schools to develop library habit in their wards is colossal. This has joined force with other factors in producing stagnation. The schools of independent India must function in a different way. · They should fit the children of India to use libraries effectively and continue their self-education throughout their life whatever be their field of work, be it pursuit of fundamental sciences, engineering, technology, agriculture, animal husbandry, medicine, manufacture, any of the arts and crafts, fine arts, journalism, literature, education, public service or law. To fit them for the use of libraries, the schools themselves should maintain libraries on modern lines and employ librarians who have had special training in the work and whose general learning and status make them equals of the teachers of the schools. The 4,144 high schools will require at least 10,000 librarians, leaving the smaller secondary schools to the care of visiting librarians.

The 1,87, 176 middle and elementary schools must be helped by at least 1000 visiting librarians. Thus the academic libraries will require 12,800 trained librarians.

933 Public Libraries

There is now hardly a public library system in our land to give service of a general nature. The few libraries which exist must be put in charge of trained librarians. It is difficult to determine exactly the number of librarians needed for this purpose. I guess that it may be about 1000.

934 Total Immediate Staff

Thus the total number of professional librarians needed to serve the general public, to reorient the work in the existing schools and colleges and to vitalise and make progressive the existing industries and the Government work, there must be 17,400 Librarians of professional status. Of these, it may be sufficient if about 2,000 are non-university men who have had a rapid three-months training in library routine. About 10,000 may be graduates with a teacher's diploma and a Certificate in Librarianship earned after the satisfactory completion of a six-months' course. Of the remaining 5,400, about 5,200 should be graduates with a University Diploma in Library Science and of the rest, who should be the learders of the profession and on whom the future development of the library movement will have to depend, all must be graduates in Library Science and some should have tasted the joy of research and the sign of it should normally be the possession of a Doctorate in Library Science.

If even this modest provision is not made for the immediate library man-power of India, her schools, and colleges will drag on the formal,ritual, ineffective existence to which they have been accustomed till now ; the Universities will fail to provide the necessary facilities for the gifted sons of the land to extend the

sphere of konwledge to the degree which independent India needs from them and is within their capacity ; a large section of the people who had been made literate at an enormous cost of public money will lapse into illiteracy ; the commerical enterprise of the country will suffer for want of dissemination of accurate and up-to-date information in the way in which the other countries have it done through organised library service ; the industrial enterprises can not stand the competition of other countries which are facilitating inventions and improvements of processes by the establishment of specialised industrial libraries ; the Departments of the Governments themselves will be meandering amidst retarding precedents and fettering ruts, prove inefficient and unprogressive and fail in helping the development of the country at the proper speed and in maintaining India's rightful place among the comity of nations. But there is a danger of the urgency for library service not being sensed properly by many, as the benefits of its existence and the ill effects of its absence are of a deferred nature and not immediate That is the reason why Library service and Library Science have to depend for due recognition and adequate provision, not on ordinary adminstrators, but on statesmen endowed with vision.

935 Total Ultimate Staff

I shall next give you an idea of the ultimate man-power which will be needed in India. These and other necessary figures have been worked out in my *Library development plan for India* now being printed. I shall calculate on the basis of the 1942 census, assuming, for definiteness, that the population will not increase for another thirty years. Thirty years have been taken as a liberal upper limit for library movement to put on full steam and reach its steady state. When thirty years are mentioned, many persons say that it will be too much of a delay. They do not realise that there are three bottlenecks which will

determine the pace of progress - trained personnel, buildings and books on current thought in Indian Languages and of all the necessary standards. There is also the finance. When the finance is discussed, those who complained of delay begin to speak just the other way; they say that my plan is too ambitious and that it must be more realistic. We can't have it both ways. My choice of a thirty-year period for the completion of the plan envisages that the wealth and taxable capacity of the country will so increase with the enlightenment and the industrious mood, which will come on the people with the march of library movement and will be such that in thirty years 1 per cent of the total budget of the country or its equivalent of $6\frac{1}{3}$ per cent of the educational budget will yield the necessary sum to maintain a fully grown nation-wide library system. I have also assumed that the national wealth will steadily increase during the next thirty years so that the library fund also steadily increases making possible a steady increase in the number of libraries and in the man-power. It is further assumed that by the end of thirty years library habit and library consciousness would have become so intense that all libraries will have to work on all days of the year and at least for $15\frac{1}{2}$ hours for each day - say from 6-30 a. m. to 10 p. m. Prior to the debacle brought about by the joint incidence of war-conditions and political and communal blight, the steady development of the Madras Univesity Library demonstrated how eager our public were to have access to the library on all the days of the year without exception and during all the working hours of the day. It is further assumed that the library system will include the following categories of libraries. The ultimate number of libraries and the ultimate professional staff which will be needed in each category are shown in the second and the third columns.

Type of Library	After 30 years	
	Ultimate Number	Ultimate strength of staff
1. Librachines *i. e.* travelling libraries visiting once in a fortnight each of the 2,68,361 delivery stations to serve the 36,66,52,000 rural folk scattered in 79,235 villages and 5,72,923 hamlets.	13,107	25,000
2. Branch libraries for the towns of populations less than 50,000.	4,100	12,000
3. Rural Central Libraries to feed the librachines and the Branch libraries in towns.	321	3,000
4. City Central Libraries in cities with a population greater than 50,000 to serve 2,31,90,000 city population.	154	1,500
5. City Branch Libraries.	712	2,000
6. Provincial Central Libraries.	22	1,000
7. National Central Library.	1	400
8. University Libraries.	25	500
9. College Libraries.	600	3,000
10. High School Libraries.	9,000	28,000
11. Middle and Primary School Libraries.	20,00,000	10,000
12. Government Departmental Libraries.	200	1,500
13. Industrial Libraries.	1,000	5,000
14. Commercial Libraries.	500	3,000
15. Newspaper Libraries.	100	500
16. Libraries for special classes as for prisoners, patients, blind etc.	1,000	2,000
17. Libraries for information service in foreign countries.	50	100
18. Libraries of learned bodies, clubs, political parties etc.	500	1,000
Total :		1,00,000

At present the professionally trained staff is less than 200. This will have to be stepped up to 1,00,000 in thirty years if the country should have the satisfaction of providing library service of the right kind for all. In a planned development, the country must train about 3,500 librarians each year to reach the full strength in thirty years and to replace those who retire by efflux of time thereafter. To train 3,500 librarians in a year, we should have 1000 teachers of Library Science. So many teachers can not be trained in one year. Perhaps 20 teachers can be trained each year. This means that the full complement of teachers will be had only after five years. The annual rise in the number of trained librarians can reach the desired level of 3,500 only after six years after the development plan proposed is put into operation. Till then, only a very much smaller number can be trained each year. I need not go into the further details of setting the pace of progress. They will be found in my *Library development plan* along with the financial and the building programme. Of the 3,500 librarians to be trained each year, about 1,000 may be non-graduates who have taken a rapid course of training for three months. About 1,000 may be graduates with a teacher's diploma and a certificate in librarianship earned after training for six months. Of the remaining 1,500, about 1,300 should be graduates with a University Diploma in Library Science earned after a one year course of training. About 150 should have a good primary degree in an arts or science subject and a post-graduate Degree in Library Science, earned after an additional year of intensive training after taking the Diploma. At least 50 should be capable of attaining the highest eminence possible. They should have a highly organised personality. Their professional level should be symbolised by a Doctorate in Library Science. They should be capable of continuing their research. These are the persons who will have to be put in charge of Provincial Central Libraries and University Libra-

ries. The progress and standard of library service will depend on their initiative, imagination and drive. The tallest among them will be the National Librarian, whose personality will inspire the library personnel of the whole nation and who will be a worthy representative of the library personality of India in the international world.

94 Amplitude

The ampltitude of the coverage of the field of Library Science needed for securing adequate universal library service is thus as vast as it can be. At one extreme of the ultimate total library man-power of 1,00,000 we shall have 30,000 men of quite ordinary attainments with a smattering knowledge of but the routine work of small libraries, while 1,500 will be better organised personalities, capable of leadership and endowed with vision. A few of these will be superior persons devoting most of their time to research in Library Science.

95 Library Science and National Revival

The facts and figures which I have given here in outline generally escape notice; and naturally the necessity and urgency of planning the library structure of India as a whole tuned to serve the multiple needs of society is hardly felt. But can we really ignore these facts in the long run? Should we not realize that they give us not only a programme of development in thirty years but also a concrete measure of the distance that we have to cover as a nation in order to catch up the van-guard of the progressive nations of the world? Can we say now that free India has no such ambition? Again do we not want that the various national development plans—educational, economic and social—which are being worked out, should be executed and their objectives achieved with the least wastage? No doubt we do; but have we provided against

wastage ? The facts and figures which I have already placed before you give also a correct measure of the work that must needs be done to prevent and minimise nation-wide wastage. After all the library systems of the forward countries of the world are not mere ornamental appendages ; they are an inseparable and functioning part of the forces which have shaped their destiny. They have not come as an after-thought, but have evolved under the rigorous demands of necessity ; the social pressure that is released through democracy can not be suppressed and the requirements of efficiency in a competitive world can not be ignored. A pervasive web of library service functioning in intimate relation with the work of the nation has contributed enormously towards preventing wastage of national effort in all directions and has made social and individual life highly efficient. That is not all. Planning life and planning history is a foolish and dangerous game if it ignores the inexorable laws of progress and puts aside even for the time being the subtler but essential elements of historical experience. We live in an age of planning but we must plan intelligently. Plans that are not conceived on a high key ignore the subtle factors of life and inevitably contain in them the seeds of dehumanising regimentation and ultimate crash. I appeal to you, let us not be guilty of the error which our children and our children's children will pay for. A society which does not provide for energising each individual member through the instrument of every social plan it frames is bound to suffer in the hands of history. The library programme which I have presented to you is an essential part of the safeguard against such fatal developments of planned life. Will you not then study the implications and urgency of it more carefully ? Remember also that the success of the library plan, as of every other plan, would depend inescapably on the quality and the strength of trained personnel *i.e.* the profession of librarians. The technique, the

knowledge and the role and purpose of the library profession form the field of Library Science. Let us pursue it with a devotion. Let us pursue it together. Let us be guided in its pursuit by the exhortation of the Rigvedic seers :

"Meet together, talk together, understand aright.
Pray in common, achieve in common, let there be unity and understanding.
Alike be your intentions, harmonious your feelings.
And concerted your thoughts, so there may be complete union among you."

संगच्छध्वं संवदध्वं सं वो मनांसि जानताम् ।
समानो मन्त्रः समितिः समानी समानं मनः सह चित्तमेषाम् ॥
समानी व आकूतिः समाना हृदयानि वः ।
समानमस्तु वो मनो वः सुसहासति ॥

APPENDIX

UNIVERSITY OF DELHI

DIPLOMA AND DEGREE COURSE IN LIBRARY SCIENCE ORDINANCES

1. There shall be a course in Library Science leading to the Diploma in Library Science and the Degree of Bachelor of Library Science.

2. Every candidate seeking admission to the Diploma or Degree Course must have passed the examination for a degree in Arts or Science of the University of Delhi ; or a degree of any other university recognised as equivalent thereto; or the highest Oriental Title awarded by any university and recognised by this University for this purpose, provided such a candidate has also passed the English part of the Higher Secondary Examination of the Board of Secondary Education of Delhi or of any examiation recognised as equivalent thereto, or the English part of the Intermediate Examination of any university.

3. Every candidate for admission to Examination for the Diploma in Library Science and the Degree of Bachelor of Library Science must, after his admission, have prosecuted a regular course of study as hereinafter prescribed for not less than one and two academic years respectively.

4. The examination for the Diploma in Library Science shall consist of:—

		Marks
(a) Library Classification (Theory)	(3 hrs)	100
(b) Library Classification (Practical)	(3 „)	100

		Marks
(c) Library Catalogue (Theory)	(3 hrs)	100
(d) Library Catalogue (Practical)	(3 „)	100
(e) Bibliography, Book Selection and Reference Service	(3 „)	100
(f) Library Organisation	(3 „)	100
(g) Library Administration	(3 „)	100

5. Minimum number of marks to secure a place in the First Division shall be 60% of the tolal number of marks; minimum for a place in the second Division, 50%; and minimum for a place in the Third Division and a pass 40%.

6. Every candidate who is successful in the Diploma Examination shall be awarded the Diploma in Library Science.

7. A candidate who secures not less than 50% of the marks in the Diploma Examination shall be eligible for admission to the second year of the course for the Degree of Bachelor of Library Science.

8. A candidate who possesses the qualifications prescribed in ordinance 2 and has secured not less than 50% of the marks in the Examination for the Diploma in Library Science of any other University recognised as equivalent to the Diploma Examination of the University of Delhi may be admitted to the second year of the course for the Degree of Bachelor of Library Science provided that he takes an admission test in Library Classification and Library Catalogue conducted by the Department of Library Science and obtains not less than 50% of the total marks.

9. The examination held at the end of the second year of

the course for the Degree of Bachelor of Library Science shall consist of:—

		Marks
(a) Field of knowledge and Methods of Investigation	(3 hrs.)	100
(b) Advanced Library Classification (Theory)	(3 „)	100
(c) Advanced Library Catalogue (Theory)	(3 „)	100
(d) Advanced Library Classification and Catalogue (Practical)	(6 „)	200
(e) Advanced Library Organization	(3 „)	100
(f) Academic Libraries, or, Business Libraries, or, Archival Libraries	(3 „)	100
(g) Records in Bibliography or Abstracting, and Reference Service and Administration.		100

10. Minimum number of marks to secure a place in the First Division shall be 60% of the total number of marks; minimum for a place in the Second Division, 50%, and minimum for a place in the Third Division and a pass, 40%.

Syllabus for the Diploma Course

1. Theory of Library Classification

Arrangement of books. Specific subjects. Filiatory order. Need for ordinal numbers. Schemes of classification.

Main class. Ultimate class. Call number, Class number and Book number.

Foci, Facets and Phases. Canons of classification.

Classification of books by the Decimal and the Colon Classifications. Critical study of the two schemes.

2. Practical Classification by the Colon and Decimal Schemes

3. Theory of Library Catalogue

Purpose of library catalogue. Kinds of entries. Parts of entries. Types of library catalogue.

Classified catalogue. Choice and rendering of heading. Style of writing.

Dictionary catalogue. Choice and rendering of heading. Style of writing.

Use of the *Classified catalogue code*, the *Anglo—American code*, the *Rules for a dictionary catalogue* and the *Dictionary catalogue code*.

Canons of cataloguing. Chain procedure. Physical form of catalogue.

(Detailed knowledge of the rules relating to the Corporate Authors, Composite books and Periodical Publications will not be required.)

4. Practical cataloguing by the *Classified catalogue code* and the *Dictionary catalogue code*.

5. Bibliography, Book-Selection, and Reference Service

Subject Bibliography :

Kinds of bibliographies. Economico-bibliographical chain. Respective agents, purpose and reference value.

Subject bibliographies including bibliography of bibliographies and abstracting periodicals. Provision for different subjects

Physical bibliography:

Paper making. Printing. Illustration. Book-binding. Covering materials. Stitching. Forwarding. Specification for library binding.

Reference service:

Definition. Ready reference service. Reference books. Long range reference service. Library publicity.

Book selection:

Principles. Deciding factors. Demand. Finance. Standard. Sources for book selection.

6. Library Organization

Laws of library science. Educational and other social functions of libraries.

Types of libraries. National library system. Library functions of the Union and the State Governments and of Local Bodies. Co-ordinating libraries.

Library authorities. Library committees. Library rules.

History of library movement in India, Europe and America, since 1850.

Library building and equipment for small libraries. Counter, stack-room and reading-room and their equipment.

7. Library Administration

Routine for the following: Book-selection, book-purchase, periodical publications, accessioning, preparation of books for public use, circulation work, shelf work, binding, budget, accounts, stores, diaries, statistics, annual reports and records.

Syllabus for the Second Year Course of the Degree Examination

1. Field of Knowledge and Methods of Investigation

The field of knowledge as mapped in schemes of library classification. Its demarcation and definition into sections and sub-sections. Field of knowledge as a static continuum.

Inter-relation of sections. Modes of inter-relation and cross-section. Formation of new sections. Modes of formation: Dissection; Denudation; Lamination; Loose assemblage; Dressing. Field of knowledge as a dynamic continuum.

Terminology, nomenclature and fundamental terms and their standardisation.

Methods of pure sciences, applied sciences, fine arts and social sciences.

Formal, speculative and authority-centred modes of thinking. Intuition.

Descriptive formulation and interpretative explanation. Secondary causes and ultimate causes.
Facts, laws, and theories. Fictions and abstractions.

2. Advanced Theory of Library Classification

Advanced study of the syllabus prescribed for the Diploma Examination.

Sharpening of foci. Addition of new foci. Construction of facet formulae. Resolution into phases. Anteriorising and posteriorising phases. Optional facets.

Evolution of classificatory technique since 1870. Comparative study of schemes of classification.

Classification of books, monographs and articles by the Universal Decimal and Colon Classifications.

3. Advanced Theory of Library Catalogue

Advanced study of the syllabus prescribed for the Diploma Examination.

Detailed and comparative study of the *Classified catalogue code*, the *Anglo-American code*, the *Rules for a dictionary catalogue* and the *Dictionary catalogue code*.

Corporate Author headings, composite books and periodical publications.

Books with abnormal title-pages.

Annotation. Co-operative cataloguing. Alphabetization and its problems.

4. Advanced Library Organization

Advanced study of the syallbus prescribed for the Diploma Examination.

Library legislation. Factors for legislation. History of library legislation in Great Britain and the United States. Copy-right libraries.

Library building and equipment for Central City Library, Central Rural Library and Regional, State, and National Central Libraries.

Library system in relation to mass education, political, industrial and economic life and social and cultural advance. Organisation for national and international bibliographies. Exchange of publications

National and international inter-library loan.

5. (1) Academic Libraries

School library. College library. University library. Library of research institution.

Place of library in educational institutions. Correlation with class-room work. Library hours. Library records of students. Library lessons.

Relation with teaching faculty. Book selection. Class library. Extension materials. Library publicity.

Library organization. Library finance. Library building and equipment.

Library Administration. Purchase of books and periodical publications. Accession work. Book display. Topical sequences. Textbook library. Weeding out. Display and circulation of periodical publications. Bibliographical service. Library bulletin.

(2) Business Libraries

Types of business libraries. Industrial libraries. Commercial libraries. Newspaper office libraries. Libraries of Government Departments.

Kinds of business libraries. Libraries of individual business houses.

Place of library in business organization. Correlation with the activities of the departments. Relation with the staff of the department.

Organization of the different types and kinds of business libaries. Library finance, building and equipment.

Classification and filing of fugitive materials like prospectuses, leaflets and clippings. Help to classification and arrangement of commodities.

Library administration. Selection and purchase of books and periodical publications. Accession work. Circulation and display of books and periodical publications. Extension service to the workers.

Bibliographical service. Abstracting work. Library bulletin. Help in the classification and arrangement of specifications and standards.

(3) Archival Libraries

Archival administration — theoretical and practical.
Preservation of archives — theoretical and practical.
Binding, preservation and repair of books and records.
Calendering and indexing — theoretical and practical.

6. Advanced Practical Classification and Cataloguing

The Colon and the Universal Decimal Schemes for classification and the *Classified catalogue code* and the *Dictionary catalogue code* for cataloguing.

7. Records in Bibliography or Abstracting and Reference Service and Administration

These are the records of the practical and observation work done by each student in the subjects specified above during the second year of the course under the direction and guidance of his supervisors and duly certified by the Head of the Department as a faithful record.

Books prescribed for the Diploma Examination

1. Theory of Library Classification

Text books:

1. DEWEY (Melvil): Decimal classification. Edn. 14.
2. RANGANATHAN (S. R.): Colon classification. Edn. 2
3. RANGANATHAN (S. R.): Library classification: Fundamentals and procedure. (Part 4 omitted).
4. RANGANATHAN (S. R.): Elements of library classification.

Reference books:

1. MERRIL (W. S.): Code for classifiers.
2. SAYERS (W. C. Berwick): Introduction to library classification.
3. RANGANATHAN (S. R.): Prolegomena to library classification.

2. Theory of Library Catalogue

Text books:

1. AMERICAN LIBRARY ASSOCIATION and (British)

LIBRARY ASSOCIATION. Catalogue rules : Author and title entries. Rev. edn.

2. CUTTER (Charles A.) : Rules for a dictionary catalogue.
3. RANGANATHAN (S. R.) : Dictionary catalogue code.
4. RANGANATHAN (S. R.) : Theory of library catalogue. (Omitting part 4 and chapters 62 and 63)
5. „ „ : Classified catalogue code.

Reference books :

1. FELLOWS (Dorcas) : Cataloguing rules.
2. LIBRARY OF CONGRESS : List of subject-headings.
3. SHARP (Henry A.) : Cataloguing.
4. QUINN (J. Henry), etc. : Manual of cataloguing.

3. Library Organization

Text books:

1. RANGANATHAN (S. R.) : Five laws of library science.
2. RANGANATHAN (S. R.): Preface to library science.
3. HEADICAR (B. M.): Manual of library organization.
4. RANGANATHAN (S. R.) : Library development plan, with a draft library bill.
5. MCCOLVIN (L. R.) and REVIE (J.): British libraries.

Reference books:

1. MINTO (JOHN) : History of public library movement in Great Britian and Ireland.
2. BOSTWICK (Arthur E.) : Public library in the United States.
3. KUDALKAR (J. S.) : Baroda library movement.

4. Library Administration

Text books:

1. DOUBLEDAY (W. E.) : Manual of library routine.

Reference books:

1. BROWN (J. D.) and SAYERS (W. C. B.) : Manual of library economy.
2. RANGANATHAN (S. R.) : Library administration.
3. HARROD (L. M.) : Lending library methods.

5. Bibliography, Book Selection, and Reference Service

Text books:

1. SHORES (Louis) : Basic reference books.
2. ESDAILE (A.) : Student's manual of bibliography.
3. COCKERELL (D.) : Some notes on book-binding.
4. RANGANATHAN (S. R.) and SUNDARAM (C.) : Reference service and bibliography. Vol. 1.
5. DRURY (F. K. W.) : Book-selection.

Reference books.

1. MUDGE (I.G.): Guide to reference books.
2. RANGANATHAN (S. R.) and SIVARAMAN (K.M.) : Reference service and bibliography. Vol. 2.
3. WYER (James I.) : Reference work.
4 MCCOLVIN (L. R.) : How to find out.

Books prescibed for the Second Year Course of the Degree Examination

1. Field of Knowledge and Methods of Investigation

1. PIPER (Raymond F.) and WARD (Paul W.) : Fields and methods of knowledge.
2. BLISS (Henry Evelyn) : Organization of knowledge and the system of the sciences.
3. JEVONS (W.S.): Principles of science.
4. DEWEY (John) : Logic , the theory of inquiry. Part 4.
5. RITCHIE (A.D.) : Scientific method.
6. THOMPSON (J.A.) : Introduction to science.

7. KIRKPATRICK (Edwin A.) : The sciences of man in the making.
8. KAUFMANN (Felix): Methodology of the social sciences.

2. Advanced Theory of Library Classification

1. Schedules of Universal Decimal Classification.
2. DEWEY (Melvil) : Decimal classification. Edn. 14.
3. RANGANATHAN (S. R.) : Colon classification. Edn. 2.
4. BLISS (Henry Evelyn) : Bibliographical classification.
5. BROWN (James Duff): Subject classification. Rev. edn.
6. Schedules of Congress classification.
7. RANGANATHAN (S. R.) : Library classification : Fundamentals and procedure.
8. SAYERS (W.C. Berwick): Manual of library classification.
9. BLISS (Henry Evelyn) : Organization of knowledge in libraries.
10. RANGANATHAN (S. R.) : Prolegomena to library classification.

3. Advanced Theory of Library Catalogue

1. AMERICAN LIBRARY ASSOCIATION and (British) LIBRARY ASSOCIATION : Catalogue rules: Author and title entries. Rev. edn.
2. CUTTER (Charles A.): Rules for a dictionary catalogue.
3. RANGANATHAN (S. R.): Dictionary catalogue code.
4. FELLOWS (Dorcas): Catologuing rules.
5. RANGANATHAN (S.R.): Classified catalogue code. Edn. 2.
6. HANSON (J.C.M.): Comparative study of cataloguing rules.
7. OSBORN (Andrew D.) : Prussian instructions.
8. AMERICAN LIBRARY ASSOCIATION: List of subject-headings.
9. LIBRARY OF CONGRESS: List of subject-headings.

10. SAYERS (W. C. Berwick): Manual of descriptive annotation for library catalogue.
11. RANGANATHAN (S.R.): Theory of library catalogue.
12. SHARP (Henry A.): Cataloguing.
13. RICHARDSON (E.A.): Some aspects of co-operative cataloguing.
14. PIERSON (H.W.): Guide to the cataloguing of serial publications of societies and institutions.
15. THORNTON (John L.): Cataloguing in special libraries.
16. PETTEE (Julia): Subject headings: The history and theory of the alphabetical subject approach to books.

4. Library Organization

1. MCCOLVIN (L. R.): Public library system of Great Britain : A report on its present condition, with proposals for reorganization.
2. AMERICAN LIBRARY ASSOCIATION. COMMITTEE ON POST-WAR PLANNING. Post-war standards for public libraries.
3. RANGANATHAN (S. R.) : Library development plan, with a draft library bill.
4. MINTO (John): History of public library movement in Great Britain and Ireland.
5. BOSTWICK (Arthur E.): Public library in the United States.
6. ESDAILE (A.) National libraries of the world.
7. KUDALKAR (J. S.): Baroda library movement.
8. JOHNSON (J. E.): County libraries.
9. MCCOMB (D. Q.): Public library buildings.
10. SANDERSON (C. R.): Library laws.
11. AMERICAN LIBRARY ASSOCIATION: American library laws.
12. JOECKEL (C. B.): Government of American libraries.

5.1 Academic Libraries

1. FARGO (Lucile): Library in the school.

2. DOUGLAS (Mary Peacock): Teacher librarian's handbook.
3. RANGANATHAN (S. R.): School and college libraries.
4. RANDALL (W. M.) and GOODRICH (F. L. D.): Principles of college library administration.
5. BUSHNELL (G. H.): University librarianship.
6. THORNTON (J. L.): Special library methods and instructions to special librarianship.
7. RIDER (Fremont): Scholar and the future of research library.
8. LYLE (Guy R.): Administration of the college library.

5.2 Business Libraries

1. MANLEY (M. C.): Library service to business.
2. JACKSON (Lucille): *Ed.* Organization and administration of a special library.
3. WRIGHT (J. E.): Manual of special library technique. Edn. 2.
4. ASSOCIATION OF SPECIAL LIBRARIES AND INFORMATION BUREAUX: Reports of proceedings of the Conferences.
5. SPECIAL LIBRARIES ASSOCIATION. PUBLICATION COMMITTEE: Special library in business.

5.3 Archival Libraries

1. MULLER (Samuel), etc.: Manual for the arrangement and description of archives, etc. Edn. 2.
2. JENKINSON (H.): Archive administration.
3. MINOGUE (*Miss*): Care and preservation of records.
4. GRANT (J.): Books and documents.
5. FORSYTH (K. L.) : Book-binding.
6. FREY AND VEITCH: Preservation of leather book-binding.
7. PLEDERLEITH: Conservation of prints, drawings and manuscripts.
8. U. S. A. NATIONAL ARCHIVES: Building and equipment for archives (Bulletin No. 6).

9. SOLA (R. D.) : Microfilming.
10. INSTITUTE OF HISTORICAL RESEARCH, London: Bulletin No. 1.
11. SAINTSBURY (Noel): *Ed.* Instruction to editors.
12. WHEATLEY: How to make an index.
13. INDIA. IMPERIAL RECORDS DEPARTMENT. Rules for indexing records.

INDEX

The figure against an entry represents the chapter, section or subsection, to which it belongs.

i. r. t. = in relation to
q. i. r. t. = quoted in relation to
r. i. r. t. = referred in relation to

ACADEMIC library :—*i. r. t.* Field of library science, 33. Urgency for pursuit of library science, 932.

ACCESSION work :—*i. r. t.* Field of library science, 244. Highways and byways of library science, 542 to 545.

ADJUNCT problems :—*i. r. t.* Field of library science, 4. Highways and byways of library science, 59.

AESOP'S fox :—19.

ALIENS :—*i. r. t.* National Central Library, 311.

ALL India Library Conference :—67.

AMRAVANA nyaya :—311.

ANANDA :—15.

APPROACH from the side of :—Books, 2. Readers, 3.

ARCHBISHOP of Canterbury :—341.

ARCHIVAL library :—391.

ASSEMBLAGE, Loose :—44.

ATOMIC energy :—14.

BAMBERGER (Louis) :—814.

BARGAIN for science :—813.

BIBLIOGRAPHY :—Enumerative, 43. Physical, 42.

BINDING :—432.

BIRCKBECK :—12.

BOOKS :—*i. r. t.* Description, 425. Display, 734. Enlivenment, 713. Exhibition, 711. Field of library science, 424. First law, 712. Ordering, 241.

BOOK-SELECTION :—*i. r. t.* Field of library science, 421. Highways and byways of library science, 541. Second law, 723.

BRAILLE books :—356.

BRITISH Museum library :—311.

BUILDING :—*i. r. t.* Field of library science, 21. Fifth law, 753. First law, 714. Highways and byways of library science, 51.

BUSINESS library :—*i. r. t.* Field of library science, 34. Urgency for pursuit of library science, 931.

CANUTE :—69.

CALCULUS of variants :—425.

CALL number :—251.

CARNEGIE benefactions :—313.

CARTER (Edward J.) :—748.

CATALOGUE :—*i. r. t.* Field of library science, 255. Laws of library science, 746. Potency of the laws of library science, 823.

CENTRALISATION :—748.

CHILDREN'S library :—351.

CHORUS of second law :—351.

CHRIST Church College :—11.

CIRCULATION work :—*i. r. t.* Field of library science, 26. Fourth law, 744. Highways and byways of library science, 56.

CITY library :—321.

CLASSIFICATION :—*i. r. t.* Field of library science, 251. First law, 7451. Fourth law, 745. Highways and byways of library science, 542 to 555. Second law, 7452. Third law, 7453.

CLASSIFIED part of catalogue :—7461.

Classified catalogue code :—823.

COLON Classification :—7451.

Colon classification :—823.

COMMERCIAL library :—*i. r. t.* Field of library science, 345. Urgency for pursuit of library science, 9315.

CONTENT of library science :—82.
COPYRIGHT library :—313.
COSMIC economy :—85.
CREATIVE joy :—13.
CROW'S eye-ball principle :—311.
CROYDON :—*r. i. r. t.* Third law, 731.
CROYDON Public Libraries :—613.
CURZON :—311.
DARWIN :—14.
Debate in the House of Lords:—841.
DELHI University :—*See* University of Delhi.
DELIGHT :—15.
DEMOCRACY :—721.
DENUDATION :—44.
DEPARTMENTAL library :—*i. r. t.* Field of library science, 348. Urgency for pursuit of library science, 9318.
DESIYA dharma :—19.
DEWEY (Melvil) :—*i. r. t.* Nation's mission, 14. *r. i. r. t.* Personal profit, 11.
DIRECTOR of Education :—732.
DISJOINTED information :—612.
DISSECTION :—44.
DIVERGENCE of practice :—611.
DRAPERS' Company research memoirs :— 812.
DRESSING :—44.
EINSTEIN :—14.
ENGLAND :—*i. r. t.* Nation's mission, 14.
ENUMERATIVE bibliography :—43.
EQUIPMENT :—51.
EXISTENCE of library science :—6.
FIELD OF knowledge :—44.
FIELD of library science :—*i. r. t.* Books, 2. Readers, 3.

FIFTH law :—75.
FIRST gleam :—613.
FIRST law :—71. *i.r.t.* Classification, 7451.
Five laws of library science :—*q.i.r.t.* Scepticism about library science, 632. *r.i.r.t.* Content of library science, 82. Its genesis, 70, 82. Triviality of the laws of a science, 631.
FOURTH law :—74.
FOX of Aesop :—19.
FRANCE :—311.
FULD (Felix) :—814.
FUNDAMENTAL values :—1.
FURNITURE :—*i.r.t.* Field of library science, 21. First law, 713.
GALILEO :—69.
GANDHI :—*i.r.t.* Martyrdom, 912. Nation's mission, 14. Service to India, 911.
GENESIS of the five laws of library science :—70.
GENUNG :—66.
GERMANY :—*i.r.t.* Nation's mission, 14.
GLADSTONE :—651.
GLASGOW :—742. Incident, 712.
GLEAM, First :—613.
GREAT Britain :—311.
GWYER (Maurice) :— 12.
HANUMAN :—2.
HIGHWAYS and byways of library science :—5.
HOSPITAL library :—354.
IMPERIAL Library :—311.
INDEPENDENCE of third law :—735.
INDIAN tradition :—16.
INDUSTRIAL library :—*i.r.t.* Field of library science, 341. Urgency for the pursuit of library science, 9311.
INSTITUTION for Advanced Study :—814.
ISMAIL (Mirza) :—67.

ISSUE method :— *i.r.t.* Field of library science, 26. Fourth law, 744. Highways and byways of library science, 56.

JAIPUR Conference :—67.

JEANS :—66.

JEVONS :—652.

KAKAKSHI gola nyaya :—311.

KEPLER :—62.

LAMINATION :—44.

LAWS of a science :—61, 62. *i.r.t.* Triviality, 63.

LAWS of library science :—7.

LAWS of motion :—62.

LAY-OUT of library science :—591.

LAYA :—15.

LEWIN (Kurt) :—68.

Library administration :— *r.i.r.t.* Context of library science, 823. Potency of library science, 823.

LIBRARY building :—*i.r.t.* Field of library sciencc, 21. Fifth law, 753. First law, 714. Highways and byways in library science, 51.

LIBRARY catalogue :—*i.r.t.* Field of library science, 255. Laws of library science, 746. Potency of library science, 823.

LIBRARY classification :—*i.r.t.* Field of library science, 251. First law, 7451. Fourth law, 745. Highways and byways of library science, 542 to 555. Second law, 7452. Third law, 7453.

Library development plan :—935.

Library development plan with a draft library bill for Bombay :—913.

LIBRARY for the blind :—356.

LIBRARY furniture :—*i.r.t.* Field of library science, 21. First law, 713.

Library law :—631.

LIBRARY legislation :—722.

LIBRARY literature :—612.
LIBRARY man-power :—93.
LIBRARY of Congress :—311.
LIBRARY organisation :—41.
LIBRARY practice :—*i. r. t.* Divergence, 612. Variety, 614.
Library Quarterly :—852.
LIBRARY science :—*i r. t.* Accession work, 244.
Binding, 422, 423. Book, 424. Book-description, 425. Book-order, 242. Book-selection, 241. Building, 21.
Catalogue, 255. Children's library, 351. Circulation work, 26. City library, 321. Classification, 251. Content, 19, 82. Cosmic economy, 85. Creative joy, 13.
Departmental library, 348. Desiya dharma, 14.
Enumerative bibliography, 43. Extent of its field, 2 to 5. Field of knowledge, 44. Fundamental values, 1. Furniture, 21. Hospital library, 354. Its existence, 6. Its highways and byways, 5. Its laws, 7. Its lay-out, 591.
Library for the blind, 356. Library organisation, 41.
Mathematics, 67. Meta-library-science, 45.
National library, 311. National revival, 95. Nation's mission, 14.
Paper-making, 421. Periodicals work, 243. Personal profit, 11. Personality betterment, 841. Physical bibliography, 42. Potency 18, 823. Pramoda, 13.
Preparation of books, 245. Prison library, 353. Publicity, 272. Purusharthas, 17.
Reference service, 27. Release, 15. Rural library, 322.
Samuhika sukha, 12. Scope for pursuit, 8. Sea-farers' library, 355. Shelf-work, 28. Social betterment, 12, 84. Special library, 35. Summary of its problems, 29.
Topology, 68. Urgency for pursuit, 9.
LIBRARY science, Laws of :—7.
LOCAL libraries :—41.

LOOSE assemblage :—44.
MADRAS :—354.
MADRAS Government :—722.
MADRAS Library Association :—732.
Madras Mail :—822.
MADRAS University Library :—*i.r.t.* Fifth law, 753. Library practice, 6. *r.i.r.t.* Content of library science, 821, 822.
MANGO grove principle :—311.
MANSBRIDGE (Albert) :—312.
MARTYRDOM of Gandhi :—912.
MASTER switch :—843.
MATERIAL of science :—65.
MATHEMATICS :—*i.r.t.* Enrichment of other subjects, 812. Nation's mission, 14. Science, 67. Scope for pursuit, 811.
Memorandum on the National Central Library :—311.
MENTAL growth :—842. Means of, 913.
META-LIBRARY-SCIENCE :—4.
METHOD of science :—66.
MIMAMSA :—311.
MIND :—63.
MOKSHA :—15.
MORLEY (John) :—651.
NATION :—*i.r.t.* Library science, 854. Mission, 14.
NATIONAL Central Library :—*i.r.t.* Field of library science, 311. Building, 75.
NATIONAL Central Library for Students :—913.
NATIONAL Lending Library :—312.
NATIONAL librarian :—935.
NATIONAL Library :—311.
National library system : A plan for India :—913.
NATIONAL revival :—95.
NEPTUNE :—62.

New English Dictionary :—652.
New foundation of logic :—63.
NEWSPAPER Office libraries :— *i.r.t.* Field of library science, 342. Urgency for pursuit of library science, 9312.
NEWTON :—62.
NORWAY :—748.
OFFICER tradion :—6.
OMAR Khayyam :—654.
OXFORD :—651.
PANINI :—14.
PAPER-MAKING :—421.
PATTISON (Mark) :—651.
PEARSON (Karl) :—*q.i.r.t.* Material of science, 65. *r.i.r.t.* Scope for pursuit of statistical analysis, 812. Statistical analysis, 67.
PERIODICALS work :—*i.r.t.* Field of library science, 243. Highways and byways in library science, 542 to 555.
PERSONAL profit :—11.
PERSONALITY betterment :—841.
PHYSICAL bibliography :—42.
POPPER (K. R.) :—63.
Post-war reconstruction of libraries in India :— 913.
POTENCY of library science :— *i.r.t.* Fundamental values, 18. Scope for pursuit, 823.
PRAMODA :—13.
PREPARATION of book :—*i.r.t.* Field of library science, 245. Highways and byways in library science, 542 to 555.
PRINCETON :—814.
PRINTING :—422.
PRISON library :—353.
PROBLEMS in library science :— 29.
Prolegomena to library science:— 853.
PSYCHOLOGY of research:--814.

PUBLIC library :—*i. r. t.* Field of library science, 322. Urgency for pursuit of library science, 933.

PUBLICITY :—*i. r. t.* Field of library science, 272. Highways and byways of library science, 572. Third law, 731.

PURUSHARTHAS :—1.

RAMAYANA :—2.

RAMANUJAN (S.) :—*i. r. t.* Research, 814. Scope of science, 632.

RANGANATHAN (S. R.) :— *See*

Classified catalogue code.

Colon classification.

Five laws of library science.

Library administration.

Library development plan.

Library development plan with a library bill for Bombay.

Memorandum on National Central Library.

National library system : A plan for India.

Prolegomena to library classification.

School and college libraries.

READING habit :—732.

READY reference service :—342.

REFERENCE librarian :—741.

REFERENCE service:— *i. r. t.* Field of library science, 27. First law, 713. Fourth law, 74. Highways and byways of library science, 57.

RESEARCH degree :—852.

RESEARCH, Psychology of :—814.

RIGVEDA :—95.

ROSS (Edward B.) :—701.

RURAL library :—322.

RUSSIA :—311.

SAMUHIKA sukha :—12.

SANDERSON (C. R.) :—631.

SCHEMES of classification:—7451.
School and college libraries :—732
SCHOOL library:—351.
SCIENCE:—*i. r. t.* Mathematical treatment, 67. Material of study, 65. Methods, 64.
SCIENCE, Stage of :—642.
SCIENTIFIC attitude :—69.
SCOPE for library science :—8.
SEA-FARERS' library :—355.
SECOND law :—72. *i.r.t.* Classification, 72.
SHELF work :— *i.r.t.* Field of library science, 28. Highways and byways of library science, 58.
SIMPLIFICATION :—747.
SIVASVAMY AIYAR :—*q.i.r.t.* Existence of library science, 632. *r.i.r.t.* Contents of library science, 82.
SOCIAL betterment :—84.
SOCIAL well-being :—12.
SOCIETY for the Diffusion of Useful Knowledge :—12.
SOUTH India Teachers' Union :—82.
SPECIAL Libraries Association :—41.
SPECIAL library :—35.
SPECIFIC subjects in library science :—5.
SPLIT mind :—70.
STAFF, Immediate :—934.
STAFF, Ultimate :—935.
STAFF formula :—754.
STAGE of science :—632.
STAGNATION of India :—92.
STANDARDISATION :—747.
STATISTICAL analysis :—67.
SUBJECT analyticals :—733.
SUBJECTIVE time :—742.
SWARTHA :—11.

TATA Institute for Social Work :—813.
TATA Institute of Fundamental Sciences :—813.
THIRD law :—73. *i.r.t.* Classification, 7453.
TIME-PIECE incident :—742.
TOPOLOGY :—68.
TOWNSHEND :—843.
TRIVIALITY of laws :—63.
TYCHO BRAHE :—614, 62.
UNESCO:—41.
UNITED States:—*i. r. t.* Doctorate in library science, 86. National library, 311. Nation's mission, 14. Research in library science, 83.
UNITED States Information Service;—713.
UNIVERSITY College :— *i. r. t.* Library hours, 611. Teaching method, 612.
UNIVERSITY of Bombay:—823.
UNIVERSITY of Delhi:—*i. r.t.* Research in library science, 68, 814, 824. Unscientific attitude, 69.
UNIVERSITY of Madras:—82, 821.
UNIVERSITY of Oxford:—651.
URANUS :—62.
URGENCY for pursuit of library science :—9.
VALMIKI :—2.
VALUES, Fundamental :—1.
WORKERS' Educational Association :—312.
WORLD Library Centre :—41.

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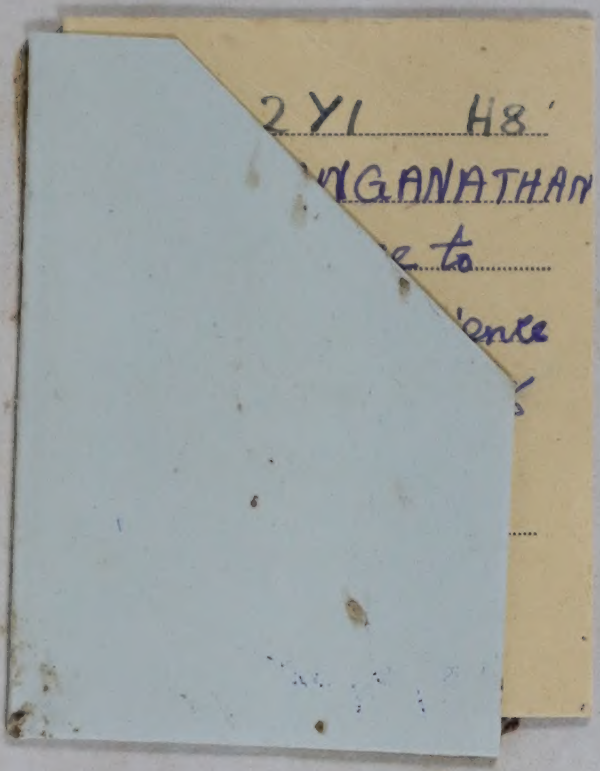
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